



Established 1848.

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No. 8, Vol. XXXVII.

Sorgo Department.

National Sugar Growers' Association.
OFFICERS FOR 1884.
President—Norman J. Colman, St. Louis, Mo.
Vice Presidents—Capt. R. Blackley, Minnesota; D. F. Kenner, Louisiana; X. K. Stout, Kansas; A. Furnas, Indiana; C. F. Clarkson, Iowa; A. J. Becker, Wisconsin; A. B. Williams, New York; Dr. E. F. Newberry, Ill.
Secretary—F. K. Gillespie, Edwardsville, Ill.
Treasurer—J. A. Field, St. Louis, Mo.

We have a number of inquiries as to the price of sorghum seed. We keep none for sale, and do not know the price. All who want seed should send a postal to those who advertise, and they can soon learn what the price is. We believe that all the parties advertising seed in the RURAL WORLD are reliable.

I do not understand by the letter of W. S. I. & Sons in late RURAL how they planted their cane seed. Will they please be a little more explicit, stating whether they plant in drills or in rows, so as to cultivate both ways, and how far apart the rows or drills are? And do they drop the seed by hand or by drill? As the time will soon be on hand for planting, I want to learn the best way from some of the RURAL WORLD readers. S. A. T.

Mr. W. P. Clement, of the Sterling Strup Works, Sterling, Kansas, after an absence from home of several weeks, in attendance at the many meetings held in the cane interest, north and west, made us a call on Monday last. They have some twenty-five thousand gallons of their sirup yet to sell, and are getting for it the top of the market.

His object in coming to this city was to make for their name and brand a reputation that should hereafter place it in the front rank of Northern cane sirups. We have no doubt of his ability to place all of his stock in this market at top prices.

We need, however, in this city, and hope soon to have, a central depot, where our citizens can get what they want, be it one, two, five or ten gallons at a time; then, and then, shall we find it properly distributed over the city and the county.

EDITOR RURAL WORLD: May I presume to apply to you for some information concerning the manufacture of sugar from sorghum. What is the machinery required, and who are the makers of the best kinds? What would be the capital required for a plant of medium capacity, and what returns might be expected? Is the process one requiring any special skill, and can it be easily learned? Have similar enterprises within your knowledge proven successful and profitable, and are there many of them in operation? This, and any other information you can give me will be appreciated. J. W.

We really cannot afford the time to go over all these details to individual enquirers. Had they kept the run of the RURAL WORLD published at \$1.00 a year for to these many years, all this information would not be wanted. Our earnest and best advice is, read the RURAL WORLD and form your own opinions.

EDITOR RURAL WORLD: I see in the published reports of several of the sorghum conventions, that it has been advised that the seed be tested by putting it in a sirup of 27° Beaume (Sp. Gr. 1.25) and that only such seed as sinks in such semi-sirup should be planted. In the absence of positive evidence as to the wisdom of such a course, I think it desirable that your readers, especially those of the northern portions of the country, should be guarded against a course which, to say the least, is of very doubtful wisdom. It would be well if the sorghum growers of Minnesota, Wisconsin, Michigan and Iowa, for example, would make a trial by experiment to determine whether their planting, that portion of the seed which should float in a semi-sirup of 27° Beaume did not give them a better crop than the seed which should sink. This experiment may be easily tried, and there is reason to believe that the result would be, that the lighter seed would give a crop of cane somewhat lighter but (and this is a matter of very great importance at the North) somewhat earlier than the heavier seed; and there is reason to believe that by a continuance of such practice for a few years the length of time required for the maturity of any given variety of sorghum may be very appreciably shortened. To those who have been constant readers of the excellent weekly bulletin of the New York State Agricultural Expt. Station, the above suggestion will have presented itself. Sincerely yours, PETER COLLIER.

Washington, D. C. Feb. 9.

From Dakota.

EDITOR RURAL WORLD: In RURAL of January 10, 1884, J. C. B. writes, "I used bagasse for fuel, it beats wood or coal." Wish he would give a description of furnace and grates for a pan 18 or 18 feet long by 3 feet wide, and cost of grates.

Again, in January 17, 1884, J. W., of Cedar Valley, Ohio, writes of a portable

urnace. I wish he would give a description of his furnace for portable or stationary. I want a furnace with a capacity of some 150 to 200 gallons per day. Heretofore I have used wood, but we have no wood here.

I think Southern Dakota should, and can be a great cane and corn country, as the soil is warm, and well adapted to vegetables as well. This will eventually be a great stock country. H. F. Kimball, Dakota.

Steam Evaporators.
BY E. W. DEMING, OF THE LAFAYETTE SUGAR REFINERY.

EDITOR RURAL WORLD: The more rapid the evaporation of cane juice, the better product; heat once applied and juice cleaned, evaporation should be as rapid as possible until 25° B. is reached, steam valve closed, semi-sirup allowed to settle, and then drawn off into settling tanks.

Without speaking of the merits and demerits of the common flat, low-sided, iron pipe evaporator, that merely simmers down the juice, I will describe the deep circular copper pan and coil used throughout Louisiana, and by the larger works of the North. These pans are not so expensive as many suppose, and considering their service, ease of management, transmission of heat to the juice, and the facility of cleaning scale from the coil, they are the most economical pan for a steam train. All steam works can afford, and should have them. The writer made such an evaporator of copper four feet in diameter, thirty inches deep, cased with wood-copper coil, and two inch brass tank valve, costing complete, eighty-six dollars and fifty cents. With eighty pounds of steam, this pan would reduce 250 gallons of juice to 25 B. in twenty minutes, and would finish 50 gallons of sirup from 25 B. to 35 B. in ten minutes. A pan like the above can be made for less than \$100, and a five foot pan for \$150. First decide on inside measurement of the pan, and order from some good coppersmith, a two inch copper worm (if a four foot pan or larger), with two inlets and two outlets with brass elbows, (and nipples three inches long threaded to standard thread) to pass through the bottom of the pan, having a shoulder on which to fit a gasket for a tight joint, and also support the coil three inches from the bottom of the pan—the coil should have other supports of copper never of wood or iron. Coil should withstand a pressure of 150 hydraulic. Copper comes in sheets 30x60 inches, but of different thickness. Planished copper (hammered) makes a nice job, but is more liable to break or crack in working it, and costs 18 cents more per pound than unplished, while the latter is fully as good, and saves you many dollars. Copper weighing 45 lbs to the sheet, will make a pan requiring no casing for its support, but needing the services of a first-class coppersmith to work it, while copper weighing 22 lbs to the same sized sheet, can be worked into a pan by a good tinner, and any coppersmith can supply a wooden bottom and sides for its support. The pan should be 30 inches deep with a flange of copper extending 4 inches above and 4 inches beyond the upper edge of the pan, seams should be hooked and solder may be used, if required. A scum pocket, 3 feet long, 12 inches wide and 12 inches deep, should be secured to the pan, (or casing), the top even with the top of the pan, and the flange bent down to carry everything into the pocket. A pipe connection should be made from the pocket to the pan, to draw the clear liquor into the pan from under the scum in the pocket, or what is better, a pipe connection from the pocket to the clarifiers, or to a tank where all skimmings and settlings are settled and racked off. A two inch brass tank valve, costing perhaps 5 dollars, should be placed in the center of the bottom of the pan, and operated by passing through one of the several wire rings on top of the valve, and raising the valve, which is self-closing; this keeps the entire contents of the pan within the influence of the heat, and leaves the surface of the juice free for treatment. To operate this pan as an evaporator, fill it two-thirds or three-fourths full of well clarified juice, turn on a full head of steam until the surface is disturbed, then close the steam valve until the pressure in the coil equals 40 on a steam gauge, when small bubbles having the appearance of foam are seen, and the whole mass seems to rise to the top of the pan; at this time a careful manipulation of the steam valve will hold the surface of the juice (or foam) even with the top of the pan, when, with a piece of sliding 3 feet long angle, bring the lower edge of the sliding parallel with the juice surface, the scum is swept into the pocket as fast as it raises, and before it has time to collect on the side of the pan, or become by heat heavy enough to settle into and be incorporated with the juice. You cannot blow up and hold it steady if a draught of air strikes the pan. A perforated skimmer should never be used on a steam clarifier or evaporator, impurities passing through, the perforations dropping into the juice are at once set and retained. If the juice is well clarified, from ten to twenty minutes are required to sweep off all the green scum that comes to the surface. Valve should then be closed until ebullition has ceased, then the valve quickly opened wide, giving it a full head of steam. This causes the steam to form on the coil very rapidly, coming to the surface with much force, breaking the

surface into tongues eight inches long, and raising the body of the juice not more than four inches.

A copper finishing pan of this style needs a flange, but no pocket, because of the density of semi-sirup, and its readiness to hold heat makes it impossible to blow it up and hold it for sweeping. From the time steam enters coils of finishing pan until 212° F. is reached, a grey scum (gum) appears on the surface, that can best be removed by a circular perforated skimmer secured to a handle six or seven feet long—this is the only place for a perforated skimmer about the establishment.

An evaporator or finishing pan should have its bottom well covered with coil, and copper is the best material, its radiating power being 898, to gold 1,000, and iron 378. An evaporator, say 3 feet wide and 10 to 14 feet long, would require an outlay of \$200 or \$300 for copper, and should have at least three inlets and three outlets for steam, in order to keep the coil free of water, as hot water at 212° F. or less, is not as effective as 332° F. with 100 lbs steam pressure. There will be no springing of pipe or noise in the pipe by steam and water mingling, if the pipe is full of live steam. In a square pan the return bends interfere with the free motion of the steam. If pipe is of copper, the side must be twenty or twenty-four inches high, and the pan surface would be too great for one man to watch and promptly remove the scum as fast as it raises.

In an evaporator scum should never pass over a boiling surface to reach a cool surface, but be removed at once. If the coil is properly arranged, there will be no side movement of the scum or juice surface whatever. The coil, in a circular pan, offers the least resistance to the passage of steam, and its straight sides bring all the scum to the surface, none can settle back under the coil as in a pan arranged for skimming on a sloping side.

All evaporators should have a good automatic steam trap. Globe valves are best on the clarifier and finishing pan. Small works can put in a four foot pan, make three or four strikes of semi-sirup, then pump it back into the pan and finish it all to 36 B. in one strike, or can have a three foot finishing pan; this will handle the semi-sirup from four six foot pans working 500 acres of cane per season. Many years of experience has given the South a good evaporator, and there is no reason why we cannot adopt it at once. With us to increase the capacity, if not as a matter of economy, iron coil must give way to copper; this necessitates a deep pan friction of steam in the return bends, calls for a circular coil, when "lo," we have the Louisiana pan! then some enterprising chap will herald to the world, through the RURAL WORLD, his description of a pan—extremely ancient in Louisiana. I wish it understood, I am not a manufacturer or agent for machinery of any kind; this is a topic omitted at our late meeting, and will, I believe, be of interest to steam workers.

West Point, Feb. 12, 1884.

Cleaning Evaporators.

EDITOR RURAL WORLD: Having been a subscriber to the RURAL, even when it was the Valley Farmer (with the exception of a time during the war), I cannot get along well without it, especially with the "Sorgo" department. I was in hopes of learning something from the Mississippi Valley Cane Growers' meeting with regard to removing the sediment that settles on the bottom of the evaporators in making sirup, but saw nothing. Will some one who has more experience give the best method of removing, or preventing it. I have used a sharp chisel to scrape it off, but that is slow, laborious and injures the pan more or less. Please inform us through the RURAL.

I see in the RURAL of February 7th, a very interesting article from D. J. B., of Jones Co., Iowa, on the cultivation of sorghum, but he omits one very important item, that of planting, will he explain that through the RURAL? Does he plant in drills? If so, how far apart the hills, and how many stalks left standing in the hills; if in checks, how wide and how many stalks left? I have as strong land as any unmanured land in the world, and I have not been able to attain such yields as he thinks should be had, "from 200 to 342 gallons per acre." I also see from the RURAL of Nov. 8, E. J. W., of Uman, Mo., writes that his cane made over 654 gallons per acre; now, if those who have attained such good results would give through the RURAL (the sorgo worker's paper) their method of cultivation and working up, it would be of incalculable value to other new beginners. Will S. E. H. & Son, of Odell, Ill., give through the RURAL his method of cleansing coal-oil barrels for sorghum, and oblige Thos. J. E. Fairville, Mo.

Bluishphite of Lime.

EDITOR RURAL WORLD: I notice in the RURAL of Feb'y 7th, that W. L. Anderson says that "any farmer who has sense enough to learn how to churn butter without his wife's help can learn to make bluishphite and use it too." Now I have churned cream into butter many times when I thought I was better able to do it than my wife, and if I can learn how to make bluishphite of lime, and how to use it, I want to do it. Is the process a secret? or will Mr. Anderson be so kind as to tell us sorghum growers how to make it, and how to use it? I judge by his writings he is intelligent and public

spirited, and wants to be of service in helping along the sugar industry. His articles have been interesting and instructive and I hope he will continue to write for the sorghum growers instructor—the RURAL WORLD. Wherein is bluishphite of lime superior to lime? I am a believer in the use of lime in some form and do not subscribe to the doctrines of the anti-lime advocates at all. A perfect defecation cannot be obtained without the use of lime. It is used by all sugar makers north and south—but how to use it properly is the great question of the hour, and I hope those who have used it successfully will tell all about it, so that others may learn to use it properly also. If Mr. Anderson can help us he will prove a benefactor in time of need.

YOUNG SORGHUM GROWER.

How to Make Bluishphite of Lime.

EDITOR RURAL WORLD: At the Cane Growers' Convention in Indianapolis, December 27 and 28, 1882, I presented samples of sugar and sirup made by Anderson & Son of Ladoga, Ind.

Notwithstanding the premium molasses of the Mississippi Valley Cane Growers' Association was on hand, I had three grades superior to it, so considered by the man presenting it. It was also conceded by several sugar makers that my sample of sugar was equal to the noted Champaign sugar. The convention was anxious to know how we could produce a better article than others. I replied it was due to bluishphite of lime, which led them to inquire how this chemical was manufactured. I promised them I would publish a full description of the process. I now attempt to fulfill my promise.

HOW TO MAKE A RETORT.
Order some potter to make you a jug holding not less than three gallons; make it thick and glaze it heavily on the inside, else the acid will eat up the jug. Make the mouth not less than two inches in diameter. Get an iron kettle and build a furnace about it so that the kettle will be stationary and can be heated to the best advantage. Put the jug in the kettle and surround it with sand to its mouth; be sure to have plenty of sand under the jug, or it will burst.

HOW TO MAKE HYDRATE OF LIME.
Get a barrel, take the head out, put in a bushel of unslaked lime, shake it under water, then fill the barrel with water, and stir up the lime well, till a strong milk of lime is made, then let it settle till the water is clear. This clear water is hydrate of lime. Now get another barrel, bore a two-inch hole in the head. Tap the other barrel just above the settled lime and draw off the clear water and fill the second barrel. (It will have a good effect if you add a gallon or two of milk of lime to the clear water.)

Get good charcoal, fill the jug half full of it, put in about the same amount of sulphuric acid.

HOW TO CONNECT THE JUG AND FILLED BARREL.

Get a copper pipe three-fourths of an inch in diameter having two elbows, and long enough between the elbows to reach from the jug to the barrel without the pipe being placed by the side of the furnace. One end of the pipe should just enter the mouth of the jug, the other should come within an inch of the bottom of the barrel. Get a rubber stopper, fit it into the mouth of the jug, bore a hole through its center just the size of the pipe, force the pipe through this till it reaches the bottom of the stopper. Bore another hole in the barrel head; fit in this a wooden stopper, bore a hole through it as through the rubber stopper, slip it up the long end of the pipe almost the length of the barrel. Put in both stoppers and fire up.

HOW TO COOK IT.
Do not fire up too fast or you will burst the jug. While you are waiting for heat get a stick (somewhat longer than the barrel, fasten some rags on the end of it and thrust them through the first hole you bored, thus making a dash. This dash need not be used until you see the gas escaping through the hole in the form of smoke, then put rags over the hole so that the gas cannot escape, wrapping them around the dash so that it will slide through them as you stir occasionally. Watch that no gas escapes at the rubber stopper. If it should, drive the stopper down as tight as the jug will bear, hang a weight on the pipe next the jug and put dough around the stopper. As the gas is formed in the jug it will escape through the pipe and rise in the barrel in bubbles, this you will hear.

HOW TO TELL WHEN DONE.
From the time when you first hear this bubbling till it is done will be six or eight hours. There is no test so good to the novice as that of smell. If you take your nose away as you would from a hartshorn bottle you know it is done. Draw your fire, letting it bubble away till it almost ceases, then take away your pipe or it will suck back into the jug. Stop your barrel tight. One barrel will make from 600 to 1000 gallons of molasses.

My advice to all who have not tried this chemical, is not to attempt to make it until they are satisfied they wish to use it permanently, but buy what they want for the coming season. It will cost \$8 per barrel, but to accommodate all who may wish to test it next year I will furnish it at \$5 per barrel.

The above is copied from the Indiana Agricultural Reports of 1882. I have nothing to add to what I then wrote, except that in fitting the rubber stopper

onto the copper pipe it would be better to cut threads on the pipe and screw the stopper on, as here is where the gas is most likely to escape.

Ladoga, Ind.

W. L. ANDERSON.

Agricultural.

Farmers' Institute Meeting.

[CONTINUED.]

Levi Chubbuck, on the subject of corn, first traced its history, and then followed with a brief analysis, showing its value as a fattening food, as well as combining a greater variety of elements in its composition than any other cereal, thus making it adapted to a wider range of use as food. Cornmeal produced excellent butter—as a cleansing crop corn is unsurpassed, better than the root crops of Europe.

The value of fodder was spoken of to some length, in which the speaker showed that 60,000,000 tons of corn fodder was wasted annually in the United States, and that this, if properly cured and saved, was capable of supporting 30,000,000 head of cattle.

The selection of seed was an important point. Seed should not be procured from points far North or South. Should be selected with a view to reducing the size of grain, and increasing the yield of grain. The most thorough preparation of the soil before planting was strongly urged. Level and shallow tillage was best, because with the first, corn suffered less during a drouth, and with the second the roots were less disturbed. In order to save the fodder part, the stalks should be cut soon after the corn has passed through the milky stage, and while the stalk is yet green, and put in small stacks containing the stalks from sixteen hills—as soon as dry, husk and crib the corn, and immediately tie the fodder in bundles and stack. After each speaker, President Walker invited the public to propound questions touching upon the subject in hand, to which many responded. In the discussion which followed, the mole, shallow, vs. deep tillage, selecting seed, corn and other interesting items were brought up. Some merriment was provoked by the question, whether the Pakeberry exerted any influence in giving color to corn?

The morning session at Bazeau, February 8th, was opened with the subject "Stock-farming," by Prof. J. W. Sanborn, who said that this section of country was producing wheat and corn, mainly. That the system of cropping has reduced the fertility of farms to so low an ebb, that the average crop of wheat does not now pay expenses. Stock-raising implies grass growing for pasture and hay, thereby preventing the great washing of land. Stock-farming is the corner-stone of all high and most profitable farming. To succeed in it requires a good steer. Here the speaker showed from weighings, made by him during a number of years, that high feeding was profitable only with good stock, the low digestive and assimilative powers of poorly bred stock throwing off, unused, the food given beyond the low power of either digestion or assimilation. Proper protection is essential. Barns will pay. They save feed in a double sense—by preventing waste, and the sheltered stock requiring less and growing better. Besides, the manure is saved. Early maturity is essential. The food necessary for the mere support of a steer of 1,000 lbs. is 18 lbs. daily. If a steer is matured at 4 years, he eats the food of support 2 years longer than is necessary, thus largely reducing the profits. A proper combination of foods was strongly urged.

The muscle and fat forming elements differed in each food, and must be intelligently mixed in due proportion, to obtain the most economical beef. We waste straw and corn fodder enough in this State, to feed as much stock as it now keeps. Several combinations of food were given, but for the present time the mixture most economical was clover hay, rich in albuminoids, with straw or corn fodder, poor in albuminoids. Two lbs. of this combination is worth about as much as two lbs. of clover. Corn should be cut as the kernel begins to harden, and put in bound shocks, of 4 hills square. As soon as cured, haul home and stack. Thus bound, they can easily be handled with a fork. Cut green, and well cured, it will, when fed with clover, make stock grow all the winter without the use of grain.

An estimate of cost of growing a steer to weigh 1,500 lbs. was given, from trials made by weighing, and was found to be \$50.00, corn fodder being rated at \$3.00, and hay at \$5.00 per ton. Did not consider that winter fattening and excessive grain rations paid, but advocated ground feed. The lecture was well delivered, it was clear, concise, highly instructive and interesting, and held the complete attention of the audience.

In the afternoon session Levi Chubbuck gave some interesting data on wheat. The importance of this grain was shown by the statement that 500,000,000 bushels were grown annually in this country and that the home consumption amounted to 61-2 bushels per capita, being a larger amount than that used by any other people. Limestone soil is best suited to this cereal, containing but a small amount of decayed vegetable matter. Granite soil was next best, and sandy soil the least desirable. In pre-

paring land for wheat it should be pulverized as finely as possible, but left moderately firm. The drilling of wheat was advised. One reason, among others, given for this, was that it enabled the grower to cultivate during the growing season. Yields of 60 to 80 bushels per acre, which were obtained in some parts of Europe, were cited to prove the value of this extra labor. In harvesting, the speaker advised cutting before the grain was fully ripe and hard, the grain being fully as good, while the straw was of more value for feeding to stock.

Chas. Teubner spoke next on "Fruits" giving a list of best varieties of each kind, and the order in which they ripened. He also illustrated the evil effects of severe pruning, by exhibiting sections of limbs from pruned and unpruned trees. The list of apples he recommended for family use, 100 trees, were: E. Harvest 3, Red June 3, Sweet June 3, Red Astra-chian 3, Maiden's Blush 5, Sweet Bough 3, Lowell 2, Fulton 3, Rambo 3, Mother 3, Jonathan 10, Grimes Golden Pippin 5, Huntsman's Favorite 10, Rome Beauty 10, Jonatan 12, Winesap 3. For market, 1,000 trees—E. Harvest 30, Red Astra-chian 40, Maiden's Blush 40, Jonathan 100, Huntsman's Favorite 50, Rome Beauty 50, Winesap 100, Ben Davis 500, Willowburg 50, Lansingburg Pippin 50. If far from market, drop first 3 varieties, and add to Rome Beauty and Willowburg. The speaker also made some pertinent remarks in regard to "Adornment of homes," advising the planting of evergreens and shrubs around every farmer's home. It costs little, and adds to the appearance and value of a farm, aside from the pleasure derived from them. Pleasant home surroundings imbued children with a love for home. Children love nature, and home should be more to them than mere shelter. A few roses climbing over a porch, a bit of rock-work with native ferns and mosses, a few clumps of evergreens, some flowering shrubs and a few beds of verbenas and portulaca, and a hanging basket or two cost but little labor and expense, and will create a wonderful change for the better. Make your houses attractive, and your boys and girls will not forsake them so easily for the city.

The afternoon session was closed by a most eloquent address from President Walker, on the subject of "50 Years Progress in Agriculture." He referred to the advancement made from time to time, from the old-time bar share plow, with straight handles, up to our present riding plow, which will turn over 4 acres a day. Compared the sowing of wheat by hand, crushing it in with a crab-apple crust, reaping with a sickle, and threshing by flail, and winnowing with a wash-tub, to our present drills, twine-binders, and steam threshers. The old-fashioned one-horse mills, which ground wheat scarcely faster than two hungry men could eat, with the Minneapolis mill of 2,000 bbl. capacity daily. Further interesting comparisons were made between the lever printing-press, doing 300 to 400 copies per day, and the steam press of to-day running off 20,000 copies an hour. The old-time goose quill, used for writing, versus the type-writer. The mail letters, costing 25 cents, and requiring weeks to reach destination, now reduced to 2 cents and 2 or 3 days' time. The old log school-house, with a log loft out on two sides, and the opening filled in with glass panes, instead of windows. The spinning-wheel, and home-made shuttle loom, to looms of a thousand spindles, and many other interesting items. He ended with a strong appeal to the moral sentiments in favor of temperance, and his earnestness carried the audience with him.

The session closed at 4:30 p. m., and the party were then furnished with a four-horse team, through the kindness of H. B. Knox and J. J. Cook, and left the same evening for Wittenberg and thence home. The members of the party traveled some fifty miles by wagon, over roads made almost impassable by the continual rains. A considerable part of the distance was made on foot, to relieve their paching teams. The determination to keep up to their appointments, in spite of the many disagreeable obstacles, was, however, well rewarded by the large and well-conducted attendance with which they were met at both places. In the session at Oak Ridge the subject matter was similar to that of Bazeau, with the addition of a talk by H. Eschbaugh, in which he dwelt on the importance of representing Agriculture in the text-books of our public schools. Agriculture, being the foundation on which all other vocations rest, it would be desirable that the text-books contain information relating to Agriculture and Horticulture in their several parts, thus early making the young mind familiar with the nature and use of some of the plants from which our main crops are made, as also some of our domestic animals, fruits and flowers. All these themes will prove as interesting (often more so) than many others now certainly be of more practical value. He said further that the State should print the books, and thus secure uniformity. C.

—J. T. Lovett, Little Silver, N. J., sends us his beautiful and highly illustrated catalogue of fruits, etc. Among the many catalogues sent us, this is one among the best, and is well worth sending for. It contains colored pictures of the Jessica grape, the Daniel Boone, and the Atlantic strawberries. Send for the catalogue to above address.

COLMAN'S RURAL WORLD

THIRTY-SIXTH YEAR.

BY NORMAN J. COLMAN

PUBLISHED WEEKLY AT

ONE DOLLAR PER YEAR.

ADVERTISING: 40 cents per line of space; no action on large or long time advertisements.

Address: NORMAN J. COLMAN, Publisher, 300 Olive Street, St. Louis, Mo.

(Advertisers will find the RURAL WORLD one of the best advertising mediums of its class in the country. This is the uniform testimony of all who have given it a trial. Many of our largest advertising patrons have used it for more than a quarter of a century, which is the highest possible recommendation of its value as an advertising medium.)

W. T. HEARNE, of Lee's Summit, Mo., advertises seed corn for sale. Read the advertisement; it is timely, and all of it will be wanted.

EVERYONE fond of hunting, fishing, and rural sports generally, will be delighted with the *American Field*, published weekly by Dr. N. Rowe, 252 Broadway, N. Y. Send 25 cents for samples, and see if we do not tell the truth.

A SALE of canned goods, 30,000 dozen 3 pound cans tomatoes, recently made at Baltimore, gave rise to a considerable comment, not on account of the quantity of goods offered in one lot, but through the low price at which the goods were sold. The prices proved the lowest on record since the introduction of canned goods, the dealers adding that a further decline would force them out of the business. The regular jobbing price the present season it appears is 55 cents per dozen, but the big sale recently made had a demoralizing effect. Tomatoes can now be grown and canned at such low figures that the prices of a few years ago will never be obtained again.

THE demand for foreign and tropical fruit in this city has grown to wonderful proportions within the past two or three years. Five or six years ago a car load of bananas in midwinter would be something of a novelty, but during the present winter, cold and unfavorable as it has been, the unloading of bananas, oranges, lemons, and similar products was of daily occurrence in front of the foreign fruit houses. Prices have been so remarkably low, that both local and outside dealers have purchased very freely. Several car loads of bananas in transit from the South during the cold snap last month were utterly worthless on arrival and were dumped into the river.

WE do not care to keep the idea of fire in the minds of our readers with a view to disturbing their rest, but it is our duty to remind them now and again of what may result from thoughtless and careless trifles. We quote from the Melbourne, Australia, *Leader*, the following suggestive item:

Our note of warning as to the danger of fire appears to have been made none too soon. It is reported that a farmer at Corop was driving some friends around to have a look at his crops, when one of the gentlemen struck a match for the purpose of lighting his pipe, and having carelessly thrown it down, the dry grass surrounding was soon enveloped in flames, which continued to spread with alarming rapidity, and notwithstanding the exertions of about 20 persons, 10 acres of splendid grass, besides a quantity of fencing, was destroyed. Had not the wind suddenly changed nothing could have prevented the flames from entering the cultivation paddocks.

INVITATION FROM AGRICULTURAL COLLEGE OF MISSISSIPPI.

GOV. NORMAN J. COLMAN: My Dear Sir—The faculty of this college, by resolution, have invited you to deliver our Annual Address on the third Wednesday in June. It gives me pleasure to inform you of their wishes, and to express the hope that one who has done so much in the cause of Agriculture, will comply with their wishes. I mail you one of our annual reports, and also one of our last catalogues.

Yours truly,
S. D. LEE, President.

Agri College, Miss., Jan. 30th, 1884.

REPLY.—Absence from home has prevented an earlier acknowledgment of this kind invitation. While we cannot at this writing, fully accept it, we will try to so arrange our affairs as to be present. We will let you know positively, within a short time, whether we can be with you, or not.

THE MARSHALL CREAMERY.

The formal opening of this, the latest addition to the butter-making institutions of the State, took place at Marshall, the well-known county seat of Saline Co., Mo., on Saturday last. At the invitation of the stockholders a public meeting of the farmers of the county had been called, and a number of speakers from a distance provided to address them on questions of the hour, viz: Missouri as a Dairy State, "Creameries, the Best Means of Developing it," and "What is Next to be Done?"

At 2 o'clock p. m., the hour set apart for the meeting, an audience of about 150 farmers, with their wives and daughters, had assembled in the new and elegant Opera house, and Col. Gist, mayor of the city, in a few well-chosen remarks, called the meeting to order, spoke of the importance of the new Marshall enterprise to the farmers of the county, and introduced the speakers to the audience.

Capt. J. B. Thompson, Treasurer and Superintendent of the La Plata, Macon County, Creamery, and ex-president of the Missouri State Press Association, and one of the best posted men in the State on co-operative dairymaking, spoke of the magnificent outcome promised the farmers of Missouri in this new and important enterprise. He presented an array of facts and figures, demonstrating beyond controversy that no State in the Union was better adapted to co-operative dairymaking than Missouri; that her soil and climate, her clear, cool and abundant streams, her wonderfully luxuriant blue grass, timothy and clover, as well as the known enterprise and wealth of her citizens, testified in trumpet tones to the outcome promised. In an hour's talk he entertained the audience in the most convincing manner, showed that dairymaking had come to stay, and if properly supported by the farmers must insure largely to their annual profit. He listened to with marked attention,

and frequently and warmly applauded.

Col. R. M. Smiley, Superintendent and General Agent of the Southwestern Creamery Association, of Kansas City, of which Messrs. Holt & Hall, late of Osceola, Iowa, are proprietors, spoke of associated co-operative effort as the best means of developing the dairy interests of the State. Col. Smiley is a forcible and eloquent speaker, thoroughly familiar with his subject, and indeed with everything else pertaining to the dairy industry. Referring to the six hundred creameries of Iowa to-day, as compared with the one existing ten years ago, he pointed with pride to the fact that, at the Centennial, that State carried off the first premium, that the same butter sent to England, more than 4,000 miles from the place of manufacture, and in competition with the oldest and best dairymen of the United Kingdom, successfully carried off the second prize offered. He compared that butter, brought to perfection by associated effort and skillful handling, with the thousand and one samples ordinarily found in the market, the product of individual effort and in the absence of expert makers; showed that the one is quoted to-day at the top of the market at forty cents per pound, whilst the other ranges down all the way from twenty-five to ten cents. Col. Smiley spoke for more than an hour, following his subject step by step in the most convincing manner, and by sheer force of logic proved to his audience that, as in all other departments of business, experienced and skilled mechanics and managers were necessary to the production of the highest grade of goods, so in the making and marketing of butter.

Mr. Longman, of the RURAL WORLD, spoke of "What is Next to be Done." Saline County has secured her first creamery, and it is a grand one, having a capacity of 2500 lbs. of butter per day, which means that number of good cows. Has she as many within twenty-five miles of Marshall? If not, will she get them? Her farmers now need cows adapted to butter-making—the Jerseys, Holsteins and Ayrshires and bulls of these to cross on the cows they now have. They must weed out the poor and unprofitable, and secure other and better ones to take their places. Must put more of their land into pasture and meadow and make, besides, two blades of grass to grow where but one grew before, by returning to the soil an equivalent for that taken from it.

He referred to the fact, that from Maine to California, and from the farthest north to the extreme south men were scouring the country for good cows and buying them in car-load lots and carting them to the people, who are alive to the question of associated dairymaking and the production of gilt-edged butter. Figures were given, showing that many cows now kept would not give two lbs. of butter per week, but that by weeding these out and introducing improved stock, this may be increased to a pound or more per day, and by the use of the creamery its value doubled or trebled, thus adding hundreds of thousands of dollars a year to the produce of the county, and with vastly less labor than is now devoted to the tillage of the soil.

Instancing what had been done by Will R. King, of Peabody, and the other members of the Saline County Short-horn Breeders' Association, in the improvement of their herds of beef cattle until they had the finest in the State, he called upon the farmers to see to it that their milk stock was likewise improved.

Closing, he said, we shall tell the world that in this new enterprise you are bound to be at the top; that no creamery in this county shall beat you; that with the best stock, abundant and luxuriant blue grass, the finest farms, in the best country, in the richest State in the Union, you have hung out your banner and on it inscribed the word *Excelsior*.

The Marshall Creamery enterprise thus inaugurated, is the property of citizens of that town, was erected at a cost of \$6,600 by Holt & Hall, of Kansas City. It is the last of nearly forty of a similar character built by the same firm in this State, and contains the very latest improved machinery. It is a very substantial structure and deserving of a visit from all who are contemplating a similar enterprise. It is 36x44 feet, and has three air chambers around the entire building. The ice house is of the same dimensions, having a capacity for 400 tons of ice and filled with a splendid article two inches thick.

The outfit consists of engine and boiler of ten horse power, two churning wheels of 300 gallons capacity, two cream vats same size, one power butter worker, cold water pump, cold and hot water coils, 35 patent refrigerators each of 20 gallons each, also 15 cans of 8 gallons each, and an excellent well of water.

These all with the ground on which it stands, and an expert butter maker for a year, are included in the cost above mentioned. We understand they have quite a number of other and similar buildings in process of erection and are in treaty for some ten or a dozen more.

The men composing the firm come to us from Iowa with the best possible education as men of means, business capacity and the highest sense of honor. They have permanently located in our State, to better carry on and perfect their system of associated creameries.

Col. R. M. Smiley, the superintendent and general manager, may be addressed at either Kansas City or Carrollton and the firm of Holt & Hall, at Kansas City.

MISSOURI AS A DAIRY STATE.

Missouri can be made a great dairy State. It is our purpose, if our life is spared long enough, to aid in bringing this about. We are willing to write, talk, travel, advise, and do anything and everything we can, to develop this important industry in our State. Our location is the best of any State in the Union for this purpose, better than in the great dairy States we have at present, as we can pasture our cows on grass at least a month longer in the fall, and a month earlier in the spring, than can the dairymen in the States north of us. Then our grass lands are not surpassed by any State—blue grass coming in spontaneously everywhere—clover, white and red, succeeding admirably; timothy, orchard grass, red top, thriving throughout the entire State, furnishing the most luxuriant pastures and meadows. Then we are in the very centre of the great corn belt, and cows in winter having a feeding ration of corn meal make the best milk and butter. Our climate is not severely cold, as at the North, and dairymen will tell everyone that nothing makes cows shrink in milk like severe cold. They say the milk bucket is a per-

fect thermometer—that mercury no more surely lowers in cold weather than milk in the milk bucket from the cow. We have everything in Missouri to encourage us in this industry.

They Have Killed the Goose that Laid the Golden Eggs.

It might be supposed by persons unacquainted with the real state of things in regard to flax culture in the western States that the unprofitable result which has caused the extraordinary decrease in the flax area, is inherent to the flax crop, and it is even not rare to hear farmers say that "flax raising does not pay."

Nothing, however, is more erroneous than this assertion. If farmers do not find flax raising profitable, they have entirely to thank themselves for such unfavorable result. They cannot surely blame the flax crop for their careless preparation of the land, for their leaving it full of weeds, and for their sowing seed intermixed with at least 40 or 50 per cent of impurities and weed seeds, and otherwise unfit for the purpose of reproduction, having for the most part lost its germinating power. These are the principal causes of the very poor results obtained of late years from flax raising in the Western States, and no other result could reasonably be expected under similar circumstances.

The present system of seed loaning cannot be too severely criticized, and I assert that it has contributed more than anything else to the utter degradation and unprofitableness of the flax crop. More than nineteen-twentieths of the flax seed annually sown in the Western States is of the above description, and it is, indeed, difficult to understand the folly of the oil crushers and their agents in loaning such utterly worthless seed to the farmers, which, by the poor crops it produces, must infallibly lead to the abandonment of flax raising everywhere, as is already the case in several Western States. Hitherto the numerous oil mills, which have sprung up like mushrooms all over the West and Northwest, through the very low prices at which they have obtained the flax seed from the farmers by the usurious system of seed loaning, have been able to pay their stockholders in many cases 25 per cent dividend per annum, but the time is fast approaching when they will have either to buy Bombay or Calcutta seed at considerably higher prices, or shut up their mills. They have in fact, "killed the goose that laid the golden eggs," for there will be an end to their golden harvests at the farmers' expense. There is another cause which, besides the execrable quality of the sowing seed, has powerfully contributed to bring about the utter degeneracy of the Western flax crop, and that is the *thin sowing*, and this is also connected with the system of seed loaning. As the seed for sowing is loaned to the farmer only on condition of delivering to the oil mill or seed dealer the crop raised therefrom, and with a view to covering the largest possible area with the smallest possible outlay on their part, whatever may be the result to the farmer, they have persuaded the latter that the *thinner sowing the better the crop*, and thus the western farmer does not sow more than two or three pecks to the acre. Now while it is quite true that when flax is sown for the seed only, it requires to be sown thinner than when the production of good fiber is the object, the above quantity of seed, even if quite pure, would be inadequate, but when, as stated above, it is intermixed with at least 40 or 50 per cent of impurities, the quantity of seed capable of germination is, in reality only from one to one and a half pecks per acre, and this could not possibly produce a satisfactory crop. If, on the contrary, one bushel of the best seed, and entirely free from impurities and weed seeds, were sown on clean land, there is no doubt but that crops of 12, 15, and even 20 bushels per acre would be produced, instead of, as now, from 5 to 10 bushels per acre, averaging from 7 to 8 bushels, which does not pay and leads to the abandonment of the flax crop.

As to the remedy to the present unsatisfactory state of things in regard to flax cultivation in the Western States, it must be evident to every one who, with an unbiased mind will look into the matter, that only a radical change in the prevailing practice will produce a change for the better and prevent the entire disappearance of the flax crop. The farmer must prepare the land intended for flax more carefully than hitherto, and above all keep it as clean as possible, and further, he should scornfully reject all seed which is not perfectly clean and free from weed seeds, and if he can not procure such seed, he should rather entirely discard the flax crop which would only cause him disappointment and loss. But the best plan would be to buy his seed from one of the large respectable seed houses, whose seed, although higher in price, will be much cheaper in the end by producing a remunerative crop.

Owing to the degeneracy of the domestic seed, which has never been renewed to any considerable extent since its first introduction into the United States, I would strongly recommend to sow next season genuine imported Russian or Dutch seed, which may be procured from the said seed houses, and which, with proper cultivation, will produce superior crops both of seed and of fiber. Thus, and thus only can the flax crop be rescued from the state of degradation and neglect into which it has fallen in the Western States, and become again one of the most profitable of all farm crops.

H. KOELKENBECK.

Hay Presses—Eitel vs. Dederick.

EDITOR RURAL WORLD: I presume you know that an infringement suit on hay presses has been pending during the last year, between Dederick and myself. The case was of this nature: I obtained a patent, July 16th, 1882, on a certain knuckle power, as used by my Farmer's Friend hay press, which is a very good power, and it seems Dederick also thought so, as he is using it right along on his Reversible Press, of which he is boasting so much, even that he can beat anything of the kind made. I take pleasure to inform you herewith, that on the 30th day of last January, the case was decided in my favor, where it justly belongs, and now it remains to be seen what Dederick will have to do in future as regards using that power, my property. Please make a local note of the above in your columns, and greatly oblige yours respectfully, Geo. Eitel, Quincy, Ills., Feb. 15th, 1884.

—Can you or any of your readers tell me through the RURAL WORLD where can be had such material as is needed for making fruit cans, for canning fruit. Also the necessary directions for constructing cans.—J. B. G., Zellville, Kas.

Notes—Correspondence.

—Will Alfalfa do well on wet bottom land in Scott Co., Ills.—O. Y. No sir, it will not.

—Where can I get a centrifugal for swinging out sugar?—J. M. C., Coffeville, Texas. This is but one among many enquiries received at this office for centrifugals and other sugar makers supplies. Surely it would pay the manufacturers to advertise them.

—Will you please give me the address of a party from whom I may buy a good Poland-China hog, as good stock as can be had in this country; also the address of some one from whom I may get a description of the best stock of white hogs in this country, and oblige yours truly.—W. C. Wrightman, Ozark, Missouri. See our advertising columns for both.

—In your next issue of the RURAL WORLD please give the address of the gentleman who wrote you for particulars regarding an advertisement of a jack; he hails either from Iowa or Minnesota. You advised some of the farmers to club together and buy one. It appeared in the RURAL WORLD about three weeks ago.—J. A. Spies, St. Jacobs, Ills. We have not preserved his address.

—Is Oahoon's Patent Seed Sower what it is recommended to be? Can farmers use it successfully?—R. G. REPLY.—Any intelligent farmer can soon learn to use it in sowing all kinds of seed, much better than by hand. It distributes the seed more evenly than hand sowing, and the seeding can be done three or four times faster. You will find it advertised in the RURAL WORLD by the L. M. Rumsey Manufacturing Co., St. Louis.

—Will you be kind enough to answer through the RURAL WORLD, the following questions: 1st. Who shall I address for Dr. Danielson's Counselor? 2nd. We want some man to come in here with a good Jack. He would have a good chance to sell him, or he could hire some one to stand him. I do not think there is any Jack in this country. (Carroll). If some man will write I will give any information I can.—John O'Donnell, Carroll, Iowa.

—ED. RURAL WORLD:—As I am now disseminating the Hansell Raspberry, Early Harvest Blackberry and Jessica Grape, the earliest varieties of their respective classes, and I believe to possess great merit beside—I desire to have them tested in various parts of the country. Knowing none so likely to carefully and thoroughly determine their value as Agricultural and Horticultural Editors, I will be pleased to mail plants of one or all, as may be desired, to Editors upon application any time prior to March 15th.—J. T. Lovett, Little Silver, N. J.

I see the Thomas Harrow advertised by C. A. Reitz in the RURAL WORLD. Is it what it is represented? Do you recommend harrowing winter wheat with it in spring?—Young Farmer. The Thomas Harrow is highly recommended, we believe, by all who have used it. We have used it with decided advantage in early spring on wheat. The ground is loosened, making a sort of soft mulch for the plants. After the beating rains of winter a hard crust is formed, and it is better to break it up, and this is done without tearing up the land.

—The American Art Journal, published and edited by W. M. Thoms, of New York, continues to hold its own as the leading musical journal of the country. For forty years or more, it has labored to educate the popular taste for a higher grade of music, and the best of evidence that all this work has not been in vain is seen in the fact, that the Journal is not only alive to-day, but that it is as flourishing as a green palm tree—the reason being, that each issue contains better analytical criticisms, a greater display of justness, a larger collection of new and interesting facts, and withal a comprehensive review of the doings of the trade, than can be found elsewhere. So it continues to increase in popularity, and we hope we shall never live to see the day when it will be otherwise.

The Cattle Hard.

H. D. Ayres writes that his herd is wintering well, and will be in good fix on the day of sale, 8th of May next.

H. D. Ayres, of Breckenridge, Mo., "advertises a lot of young bulls for sale and it will pay breeders to look at them. He always has good stock.

Wm. Pritchett of Frankford, Pike County, Mo., claims 22nd of Oct. 1884, for his day of sale. He will sell short-horns and graded stock. Has 45 head of short-horns now and 25 head of calves this spring.

J. W. Stillwell & Co.'s cow Antrim 2nd, No. 246 H. B., dropped a heifer calf two weeks since that weighed 125 lbs. In reporting the fact J. W. S. significantly asks where are your short-horns now? and adds: I shall keep the calf and see what the outcome will be.

Have our readers noticed the sale of Short-horn and Jersey cattle advertised by Alex. McCintock & Son, of Millersburg, Ky., and R. W. Owen, of North Middleton, Ky., to take place at Marshall, Mo., on Wednesday, March 5th next? That will be an important sale and we hope our breeders generally will make a note of it.

The spring sales of Kentucky Short-horns advertised in these columns to come off at Dexter Park, Sedalia, on the 15th, 16th, and 17th April next, will command national attention, because the men parties to the sale are well known and reputable breeders, and the cattle they offer highly bred and worthy the attention of the best breeders in the country. Some two hundred and fifty head of animals of both sexes and of some of the very best families known to Short-horn history, will be found in the sale, and many of them will excite a very sharp competition for them wanting them will get what they want.

We hope the readers of the RURAL WORLD will carefully read the advertisement, then write for catalogues, determine what they want, lay off those three days for service at Chicago and be sure to be there, to get if possible what they want.

It is known to the breeders of the State that the Missouri Short-horn Breeders Association will meet in annual convention at Sedalia, Mo., on the 1st Wednesday in April, the meeting to continue two days. The committee on programme desire the breeders of the State, each and all of them, to send names of themselves, with their P. O. address, and the number of cattle they have to W. H. Evans, chairman, Sedalia, Mo., as soon as possible. The association is very anxious to present an attractive programme and to make of this the best and most influential meeting ever held. We cannot urge upon our readers too strongly the importance of

responding to this request, that the number of breeders and of cattle in this State may at least be approximated and in that regard placed in the list of Short-horn States.

You enquire what our card in the Breeders' Directory in your paper, has done for us, and we have pleasure in saying that it brought us more business than we could do. That is, we could not supply the demand brought about by the little card in the RURAL WORLD.

Sedalia, Mo. W. H. & T. C. EVANS.

Diseased Cattle.

We have the two inquiries which follow, from two distinct sources, indicating anything but a pleasant condition of things. We would be very much pleased to have the experience of those who have seen and treated the disease. In the meantime we suggest an absolute change of diet, and protection from the weather. Feed bran in mashes, if possible, until the scours decrease and the appetite improves. Feed freely of oil cake meal, from two to four pounds a day, according to age. Again we invite experience and suggestion.

I have a disease among my cattle and yearlings. Commence with cough and gradually decline in flesh, eating but little. The food does not seem to digest, and gradually goes into something like the scours, and has a very bad smell. Please advise me through your paper or by letter, the best treatment.

Cadet, Mo. M. O. L.

Will you please answer through your valuable paper, the following: Our cattle have a disease that we cannot account for. Symptoms, first staggering, stiff, falling down, twitching of muscles. Lasts about one day. Recurs once in one and two weeks. Cattle are hearty; will eat when down. The muzzle moist, bowels loose. Feed on corn.

Parsons, Kas. W. D. H.

Colorado's Cattle.

The cattle interest of Colorado, says the *Denver Journal of Commerce*, is only second to that of mining. The number of cattle now in the State are:

Arapahoe.....	57,490
Bent.....	149,184
Boulder.....	23,310
Chaffee.....	5,115
Clear Creek.....	2,610
Conjoe.....	17,472
Costilla.....	13,680
Custer.....	31,028
Larimer.....	1,634
Lincoln.....	15,000
Douglas.....	35,332
Elbert.....	149,856
El Paso.....	51,414
Freemont.....	34,077
Gilpin.....	2,358
Grand.....	15,000
San Juan.....	2,200
Gunnison.....	37,741
Hinsdale.....	1,504
Huerfano.....	30,000
Jefferson.....	30,000
Lake.....	3,000
La Plata.....	30,000
Logan.....	22,242
Las Animas.....	94,548
Ouray.....	9,150
Pueblo.....	35,500
Pitkin.....	150
Pueblo.....	27,000
Rio Grande.....	7,150
Saguache.....	15,000
Summit.....	8,126
Weld.....	116,471

"A total of 1,085,109. The new counties, from which we have no report, will probably swell the number to one million and a half."

The Horseman.

Banish the Check Rein.

Mr. Wallace, of the *Monthly*, in his February issue, comes out strongly against the use of the check rein. He says, "when a man finds a check rein in his stable let him throw it out, and send his blockhead of a trainer whirling after it."

In a late issue of the RURAL WORLD we spoke of the abuse of the check rein. The best things may be used so as to be abused, but, because they may be abused, is no good reason why we should be deprived of them. We fear Mr. Wallace writes too much from a theoretical standpoint. He will not find one horseman in a hundred, even the most humane and intelligent, to agree with him. They will agree with him that the check rein, in many cases, is misused, but they will say it is also in many cases properly used—that some horses can not well be controlled without it. Some horses, when they first come out of the stable, will carry their heads high and show style and spirit, but after awhile will droop their heads. The check rein will prevent this improper drooping. In pairs, one of the team may need a check rein to prevent this drooping of the head to a lazy, drooping, un stylish position, while the other may have spirit enough to keep it properly.

Some trotting horses cannot be recovered from a break, if the check rein is not used to prevent the horse from throwing down his head and getting such a purchase on the bit as to render it impossible to control him. Every driver of experience has had horses that would do this, and that would be useless but for the check rein to prevent it.

We think, if Mr. Wallace had a little more practical experience in handling horses, he would not make such a sweeping charge against it. The fact that all drivers use them on some horses, is a pretty good reason that they should not be banished entirely—for certain men of reading and thinking capabilities, who have done nothing but handle horses all their lives, ought to be better judges than Mr. Wallace, who has been driving horses chiefly in his sanctum.

We agree with him that the check rein is greatly abused sometimes by keeping the head too high, and for too long a time, but it is cruel, ignorant drivers that do this, and they abuse horses in a hundred other ways also. The check rein should be used to prevent the horse from improperly using his head. That is its chief office, and for that purpose it will be used by intelligent horsemen as long as the noble horse is driven.

Trotting Horse Owners—The Rules Amended by the National Association.

The National Trotting association held its biennial congress yesterday at the Fifth Avenue hotel, Judge James Grant of Davenport, Iowa, presiding. Nine-tenths of the 217 associations which constitute the association were represented either by members or by proxy. Among the best known of the horsemen present were David Bonner of this city; Maj. H. C. McDowell of Kentucky; the Hon. Jesse D. Carr of California; George Sturges of Philadelphia; Burdett Loomis, Alexander Harbison, Thompson O. King, and T. J. Vall of Hartford, Conn.; L. J. Powers, Springfield, Mass.; William Edwards, Cleveland, O.; Alden Goldsmith, Washingtonville, N. Y.; George W. Archer, Rochester, N. Y.; M. T. Grattan, Preston, Minn.; D. L. Hall, Chicago, Ill.; A. G. Hancock, Kansas City, Mo.; E. L. Lowrey, Mendota, Ill.; George M. Oyster, Jr., Washington, D. C., and Edward Chapin,

York, Pa. The report of the treasurer showed a balance of \$5,599.75 on hand. The secretary's report showed that the associations which are members of the national body had during the past two years awarded \$1,692,641.32 in purses and stakes.

The principal business at the congress was the consideration of the rules, which were variously amended in matters of no special moment. The change of the most important rule was in the rule relative to the conditional entry of horses in races. This was amended so as to punish any association which accepts conditional entries for trotting events, by providing that when such a course is pursued the association shall forfeit to the national body the entire amount of the purse offered, one-half of which shall go to the informer.

There was a lively contest over the proposition to create a rule providing that in races for purses not exceeding \$200 the time made shall not stand as a record against the horse. This was offered in the interest of the Western breeders. It was not adopted, however, because of the opposition of the Eastern men, who held that such a rule would result in keeping entries from the green and slower classes, and so operate against the interest of the racing meetings.

To a committee of seven was referred the proposition to create a national stud book, the committee being instructed to report to a meeting of the board of review, to be held in Chicago next May. It was also voted that no by-law shall be adopted until after its presentation to an congress and acceptance by the following congress.

The rules were also amended so as to punish by substitution any driver who shall pull his horse so as to prevent his winning a heat or "place," which it is apparent he could win if honestly driven. The penalty for delaying in scoring was fixed at not less than \$5 nor more than \$50 for each offence. A penalty was also imposed for the helping of any horse in a race by the drivers of other horses. A penalty of \$50 was also fixed for any driver who shall drive on any non-association track while under suspension.

Officers were elected as follows: President, James Grant, Davenport, Ia.; vice-presidents, Gen. W. S. Tilton, Togus, Me.; the Hon. S. K. Dow, Chicago, Ill.; district boards, Eastern district, Burdett Loomis, Hartford, Conn.; George M. Starna, Chicopee, Mass., and John Shepard, Boston, Mass.; Atlantic district, George Sturges, Philadelphia, Pa.; Paul H. Hacke, Pittsburgh, Pa., and David Bonner, New York; Central district, Maj. H. C. McDowell, Lexington, Ky.; M. T. Payne, Kansas City, Mo., and Thomas Azorothy, Cleveland, O.; Western district, M. M. Morse, Earlville, Ill.; U. C. Blake, Cedar Rapids, Ia., and D. L. Hall, Chicago, Ill. Pacific district, N. T. Smith, San Francisco, Cal., and L. J. Rose, San Gabriel, Cal. The next congress will be held in Chicago in February, 1886.—New York Times.

Mambrino Chief Blood in the Trotter.

Mr. Simpson, in the *Breeder and Sportsman*, says: "Through many years ago there were bitter controversies over the position which Mambrino Chief was entitled to fill in the trotting records, every man who is conversant with the subject, and not swayed by prejudice, must acknowledge the great merit of the descendants of this horse. The blood mixes kindly with others of the great families of trotters, and though we claim that every one of the great families of trotters are greatly benefited by a direct strain of thoroughbreds, few will question the advantage which has followed in incorporating it with the Mambrinos. Thus, the first which gave the highest celebrity was the great, truly great, mare Lady Thorn. Her dam was by Gano, a thoroughbred son of American Eclipse, and her granddam by a son of Sir William, a thoroughbred horse by Sir Archie. Those who had the best knowledge of the capacity of Lady Thorn, when thoroughly posted in regard to the fast trotters of the past and present, rank her as being the peer of the best, and Dan Mace had the utmost confidence that the accident which disabled her was the sole reason she did not make a mark which would have been close to the best on record now. The Mambrino Chief stallions which have gained distinction have been from highly bred mares. The sire of Black Cloud, who made so capital a race at Chicago, is Ashland Chief being a mare by Imported Yorkshire, and his granddam Imported Flounce, by Mulatto. The sire of Abbotsford was Woodford Mambrino, by Mambrino Chief, and his dam Woodbine was by the thoroughbred horse Woodford. She was also the dam of Wedgewood—record 2:19; and this gives additional value to her offspring, showing that she had merit as the progenitress of trotters in her own inheritance. Woodford Mambrino, though not trotted in public until he was fifteen years old, made a record of 2:21; and his get made a fine showing in the calendar—

The Home Circle.

TO FANNY FROST.

Along the roughest shores (a) of time, a lady
cautious crept,
Perfection's ways her joyous, guileless soul,
secure they kept.
Her ever-restless, active mind employment
anxious sought,
And into fancied scenes, her hopes
phantastic wrought.
Anon, with sudden start she'd break the
tenor of her way,
Abrupt essay delight in constant change's
grand display.
Far stretched the uneven, rocky shore, far
beyond the farthest ken,
Yet further still, her thoughts beyond the
reach of favored pen.
Before her vision keen, majestic speeds a
surging crowd,
Intent on glory's brightest theme, and treas-
ure's worth so proud.
Perplexed, could she the problem solve, its
covert meaning all?
Th' impending racking woes, deceitful joys
that might befall?
—The scene is changed: now swift she floats
amid the shifting throng,
Swept by a mighty force, resistless hurling
all along.
The land marks once so well defined, ob-
scured are total lost.
The mingling shoals advance, recede, with
wildest fury tost.
Portrayed you have the busy, passing scenes
of human life,
With all the telling force of passion, and its
endless strife.
Alone, unscathed, you could not bear the
fury of the blast.
To try, were rankst folly, and a want of wise
forecast.
The mother (b) of the opening year, (c) would
fain her power show,
On you, her favored one, uncounted blessings
free bestow.
Perchance 'tis then you'll change, and Fanny
Frost just cease to be,
And join the nuptial crowd, which we so
merry often see.

REV. GEO. A. WATSON.

(a) The roughest shores, etc. The context
does not completely define the nature of the
shores, though before the end of the piece,
we perceive that the matrimonial shores are
meant.
(b) Spring, (c) Leap year.

"Affliction's Furnace."

If there is one prayer to which, more
than another, literary people should de-
voted themselves with absolute fervor, it
is that for deliverance from their
"friends." Especially should this be the
prayer of literary women. If the vic-
tim be a man, he will say, with an inimi-
table air of ease—"I am very much en-
gaged—you will please excuse me," and
either betake himself to another room, or
politely shut the door in the intruder's
face. But we, to what may we fly for
relief from the insupportable bore—usually
of our own sex—who won't take a hint,
no matter how broadly given?

Many a time I have dared to get
through my work in order to have a mo-
ment with my pencil, only to be robbed
of my reward by some woman, who,
seemingly, has no mission save to cum-
ber my room with her too frequent pres-
ence. In vain I say "I have some writ-
ing to do, and must be alone;" or, "I
have hurried with my work in order to
finish my writing by such a time," or,
"I am very anxious to finish this manu-
script, and the presence of any one save
my family, renders composition impos-
sible." In vain I lock my doors and
shade my windows while "baby"
sleeps. She "knows I am at home, but
supposes I don't hear," and keeps up her
disturbance until I very ungraciously
open my door and let her in. I say most
emphatically, that I detest Sunday visit-
ing or calling, and tell her that I always
want to read or write on that day. But,
no matter how often she may have seen
me through the week, Sunday invariably
finds her stranded at my door; and my
expressions of dislike produce no visible
effect, as the bore seems to consider that
"present company" is always excepted,
and sits out my leisure hour with the
most exasperating coolness. Only un-
mistakable rudeness will serve her case.
The bore is generally possessed of but a
limited amount of brains, and is pretty
much like one of those stereotyped medi-
cal advertisements which disgrace the
Home Circle page—when you've read it,
its read, and no amount of effort will ever
make it anything else but just what it is.

I am confidently looking forward to a
day when I shall possess a "den" to
which I may flee when beset by the
scribbling mania; whose doors I may
bar, and upon whose lockrail shall be
displayed the customary card of exclu-
sion, and in the stronghold of which,
"none shall dare molest or make me
afraid."

A few days ago, a caller asked me how
I wrote poetry. I told her, just as I did
the weekly wash; she did not see the
connection. I suppose, had I told her
there was any relation between work and
writing, she would have smiled incred-
ulously. I have had people come to me
when they knew I had scarcely time or
strength for the absolutely imperative
duties of my housekeeping, and ask me,
in the most assured manner, to write
them a few verses on some, to them,
purely personal matter; and when I re-
fused, they have become offended with
me, saying, "It is such an easy thing for
you to write. It would only take a few
minutes of your time. You needn't stop
your work." Had I, after a few hours
or days, hard, mental work, sent them
the poem, accompanied by a bill for ser-
vices rendered, they would have consid-
ered me very "small" and mercenary;
while, on the other hand, had I asked
them to do my work—sewing, washing,
ironing, etc., without an offered remun-
eration, they would have deemed me
crazy—or something worse.

A friend who thought she wrote well,
and had received some complimentary
notices through the press, wrote me that
she was seriously inclined to attempt
literature as a livelihood—it was such
easy work. She was astonished when I
wrote her, in reply, that she would find
the wash-tub the surest and easier method
of winning bread. I don't know what
discouraged her; but I do know that she
is still occupying a situation in a tele-
graph office; very well satisfied to let
literature alone as a means of livelihood.
When I see a woman, struggling along
under the triple burden of mother, wife
and housekeeper, and yet managing to
keep her wits bright and her pen pol-
ished—even though she is "not in soci-
ety," I just feel like shaking hands with

her, and would be proud of the privi-
lege. It requires an amount of courage,
perseverance, resolution and fortitude,
rarely to be found in other than such a
woman; and though she may seemingly
neglect some of the minor details of
housework in her endeavor to bear
bravely the quadruple burden, she yet
deserves great credit, instead of the
usual censure, for doing what she does
do, simply through a strong (though
perhaps mistaken) sense of duty. Her
hands may be rough and scarred and
calloused through unceasing labor, yet
I warrant you, her mentality is bright
and vigorous, her heart warm and true;
and when the Master calls her to account
for the use she has made of his gift of
talents—be it one or more, she will not
be afraid to open the record of her life,
or to meet the eye of her Judge, know-
ing "She hath done what she could."

IDYLL.

Explanation.

Remarks made by Bon Ami, and which
were published in COLMAN'S
RURAL WORLD January 10th, 1884, force
on me the duty of a reply, which I now
proceed to make. The article to which
Bon Ami refers was published October
4th, 1883. At the time of their publica-
tion, I regarded the remarks of the editor
as mere bantering, as taken literally, I
knew they were neither applicable to me,
nor to the "Editor's Sanctum Invaded."

I cannot agree with Bon Ami, that the
"Editor's Sanctum Invaded" is sarcastic.
The meaning that Webster attaches to
sarcastic is evidently foreign to the scope
of my article.

Joining issue with the editor of the
Home Circle, I maintain, and will prove,
that the "Editor's Sanctum Invaded" is not
a caricature. Webster's primary meaning
of caricature cannot be affirmed of my
article; neither can his secondary mean-
ing, which is to the following effect:
2. A figure, "or description in which the
peculiarities of a person or thing are
so exaggerated, as to appear ridiculous."

Now, may I not truthfully and appo-
sitely ask: Is it a caricature to say that
COLMAN'S RURAL WORLD is eminently
reliable in all matters regarding sordid
hum, the cow, the horse, the hog, and
many other cognate subjects? Had I
held up the editor's rather rough inter-
locutor, as superior to them in general
rural knowledge, then, indeed, might the
article, "The Editor's Sanctum Invaded"
be justly regarded as a most mendacious
caricature. But such was, by no means,
the scope of the article. I, moreover,
flatter myself, that any one capable of
distinguishing the difference between
fun and humor on the one side, and sar-
casm and caricature on the other, ought
to be able to trace out the line of de-
marcation between what I have written,
and what they have imagined, who have
so strangely misconstrued the "Editor's
Sanctum Invaded." The piece is plausi-
ble, graphic and dramatic, and it was
written with the kindest feelings in re-
gard to COLMAN'S RURAL WORLD.

Well do I remember, in years long
since passed, the keen relish with which
I perused any fancy scene in relation to
the "Editor's Sanctum," and thinking
that others might share the like feelings,
I sketched the scene described in the
RURAL WORLD of October the 4th.

Finally, it was no caricature to say
that just before the great St. Louis Fair,
the editors and the employees of so able
a paper, and so widely circulated a paper
as the RURAL WORLD, should have been
so deeply immersed in their various oc-
cupations as not to heed recent any un-
timely interruption, from whatever
source it might proceed. It was, how-
ever, a caricature on the part of the
editor, to raise the facts of that fancy
sketch occasion to the dignity of history.
Juvenis pleads innocent to the charge
of any wretched English ever con-
tributed by him to the columns of the
RURAL WORLD. Juvenis has a vast
amount of self-respect, and it is, too,
of such a discriminating nature, that he
would deem himself far beneath the dig-
nity of self-respect, were he to permit
disparaging criticism to influence him,
when he might consider his mental ex-
ertions as useful to himself or others. It
is supremely rests with Juvenis, either to
continue to write, or to more tolerably
enjoy the master effects of gifted minds,
whose productions are worthy of appre-
ciation. I must draw my remarks to a
close by a piece.

DEDICATED TO BON AMI.

Good friend, so very cute you are,
You with your knowledge may so mar,
And into folly merge it far.

Maunhausen, is he living still?
Did Juvenis, with the Bedford quill,
His brain with useful knowledge fill?
October's day so long has passed,
With living naught can it be classed,
His serene leaf has withered last.

Poor Jun'us thinks you were so long,
To sound your tocsin and the gong,
Perchance you meant no mighty wrong.

Repeat has Juvenis for himself,
He seeks no empty praise or puff;
He would not rob the witless elf.

The Ed., with grin complacent, says he's
right,
And bids him onward go, more steady fight—
Hurl down his foes, pugnacious in their
flight.

Now, Bon Ami, may well you fare,
A mother's love, a father's care,
Your soul for good may yet prepare.

JUVENIS.

Dear friends of the Home Circle, I have
been a constant reader of your many
contributions to this charmed circle, and
have been often both instructed and
amused as I whiled away a half hour,
once a week, in your company; but of all
my many unseen friends in this close
corporation there is none who have at-
tracted my attention more than that con-
tributor who signs himself "Watson";
therefore, you will please excuse me if I
dedicate my first essay to the Home Cir-
cle to this one friend, whom fortune will,
I hope, some day let me meet face to face.

You may, perhaps, Mr. Editor, be
induced to admit me into the Circle by
reason of my contribution being very
short, but I hope you will not consider
that its only merit. For if you do, then I
know for once that I shall have helped
to fill your waste basket, for which honor I
have no ambition.

My subject is "Watson," and called
AN ACROSTIC.
What—son, he signs himself,
And so a question raises,
To solve a problem—'t is yourself,
Study his—or I'll pursue,
Only bear in mind I've better rather
Not forget, a wise child 'tis, that knows its
father.

NOAH.

Cross Roads, Mo.

A HUNTER'S STORY.

How He was Overcome and the Way by which
He was Finally Saved.

(Correspondence Spirit of the Times.)

An unusual adventure which recently
occurred to your correspondent while
hunting at Brookmere in this State is so
timely and contains so much that can
be made valuable to all readers, that I ven-
ture to reproduce it entire.

The day was a most inclement one
and the snow quite deep. Rabbit tracks
were plentiful, but they principally led
in the direction of a large swamp, in
which the rabbits could run without diffi-
culty, but where the hunter constantly
broke through the thin ice, sinking into
the half-frozen mire to his knees. Not-
withstanding these difficulties, the writer
had persevered, although a very small bag
of game was the result. While tramping
about through a particularly malarial
portion of the swamp, a middle aged
man suddenly came into view, carrying
a muzzle loading shotgun and comple-
tely loaded down with game of the finest
description. Natural curiosity, aside
from the involuntary envy that instinc-
tively arose, prompted the writer to enter
into conversation with the man, with the
following result:

"You've had fine success, where did
you get that game?"

"Right here, in the swamp."

"It's pretty rough hunting in these
parts, especially when a man goes up to
his waist every other step."

"Yes, it's not very pleasant, but I am
used to it and don't mind it."

"How long have you hunted here-
abouts?"

"Why, bless you, I have lived here
most of my life and hunted up to ten
years ago every year."

"How does it happen you omitted the
last ten years?"

"Because I was scarcely able to move,
much less hunt."

"I don't understand you?"

"Well, you see, about ten years ago,
after I had been tramping around all day
in this same swamp, I felt quite a pain
in my back. I didn't mind it very much,
but it kept troubling me over my back,
and I could see that it was increasing.
The next thing I knew, I felt the same
kind of a pain in my shoulder and I
found it pained me to move my arm.
This thing kept going on and increasing,
and though I tried to shake off the feel-
ing and make myself think it was only
a little temporary trouble, I found that it
did not go. Shortly after this my joints
began to ache at the knees and I finally
became so bad that I had to remain in
the house most of the time."

"And did you trace all this to the fact
that you had hunted so much in this
swamp?"

"No, I didn't know what to lay it to,
but I knew that I was in misery. My
joints swelled until it seemed as though
all the flesh I had left was bunched at
the joints; my fingers crooked in every
way and some of them became double-
jointed. In fact, every joint in my body
seemed to vie with the others to see
which could become the largest and cause
me the greatest suffering. In this way
several years passed on, during which
time I was pretty nearly helpless. I be-
came so nervous and sensitive that I
would sit bolted up in a chair and call
to people that entered the room not to
come near me, or even to touch my chair.
While all this was going on, I felt an
awful burning heat and fever, with oc-
casional chills running all over my body,
but especially along my back and
through my shoulders. Then again my
blood seemed to be boiling and my brain
to be on fire."

"Didn't you try to prevent all this
agony?"

"Try, I should say I did try. I tried
every doctor that came within my reach
and all the proprietary medicines I could
hear of. I used washes and liniment
until I was tired to last me for all time, but
the only relief I received was by injections
of morphia."

"Well, you talk in a strange manner
for a man, who has tramped around on a
day like this and in a swamp like this.
How in the world do you dare to do it?"

"Because I am completely well and as
sound as a dollar. It may seem strange,
but it is true that I was entirely cured;
the rheumatism all driven out of my
blood; my joints reduced to their natural
size and my strength made as good as
ever before, by means of that great and
simple remedy, Warner's Safe Rheu-
matic Cure, which I believe saved my
life."

"And so you now have no fear of
rheumatism?"

"Why, no. Even if it should come on,
I can easily get rid of it by using the
same remedy."

The writer turned to leave, as it was
dark, but before I had reached the door
precisely the same symptoms I had just
heard described came upon me with
great violence. Impressed with the
hunter's story, I tried the same remedy,
and within twenty-four hours all pain
and inflammation had disappeared. If
any reader is suffering from any manner
of rheumatic or neuralgic troubles and
desires relief let him by all means try
this same great remedy. And if any
readers doubt the truth of the above in-
cident or its statements let them write to
A. A. Coates, Brookmere, N. Y., who
was the man with whom the writer con-
versed, and convince themselves of its
truth or falsity.

J. R. C.

Buchu-paiba, Great Kidney and Uri-
nary Cure. \$1.

A. J. CHILD,

GENERAL PURCHASING AGENT

And Commission Merchant.

209 Market Street, St. Louis, Mo.

Orders filled at wholesale prices. Consign-
ments received and highest market price
obtained for

Grain, Wool, Hides, Furs,

And all kinds of FARM PRODUCE.

PROMPT REMITTANCES MADE.

Agent for Plows, Acme Reapers and Mowers,
Indiana Cultivators, Ruggles and Spring
Wagons, Jones' Stock Scales, Sewing Ma-
chines, and a general line of Farm Imple-
ments, Fertilizers and Fence Wire.

CHICAGO SCALE CO.

240 E. FARMER'S SCALE, \$25.

The "Little Detective," \$10.00 to \$15.00.

300 OTHER SIZES. Reduced Price List sent
on request.

FORGES, TOOLS, &c.

BEST FORGE MADE FOR LIGHT WORK, \$10.

40 lb. Anvil and Kit of Tools, \$10.

Patented (U.S. Pat. No. 1,000,000) and
Blowers, Anvils, Vices and other articles
at lowest prices, wholesale and retail.

FRIGHTFUL MORTALITY.

LUNG AND BRONCHIAL DISEASE.

Hale's Honey of Horsebalm and Tar
Changing the Balance to the
Health Side of the Account.

Before pharmaceutical research had devel-
oped the great PULMONIC above-named, the con-
ditions of the day presented no adequate pro-
tection against the speedy development of fat-
tality of lung disease, or to palliate what was
called a majority of cases. But since HALE'S
HONEY OF HORSEBALM AND TAR was in-
troduced, persons suffering from severe COLICHS
AND COLD, ASTHMA, SORE THROAT, IN-
FLUENZA, etc., have been enabled to avail them-
selves of a reliable means of cure. Therefore de-
monstrate. Ask for HALE'S HONEY OF HORSE-
BALM AND TAR by its full name; take no
substitutes.

Pike's Toothache Drops Cure in One Minute.
German Corn Remover Kills Corns and Bunions.

THE MILD POWER CURES.

HUMPHREY'S
HOMOEOPATHIC
SPECIFICS.

In use 30 years.—Each number the special pre-
scription of an eminent physician.—The only
simple, safe and sure medicines for the people.

LIST PRINCIPAL NOS. CURES. PRICE.

1. Fever, Congestion, Inflammation, etc., 25

2. Worms, Worm Fever, Worm Cough, 25

3. Crying Colic, or Teething of Infants, 25

4. Diarrhea of Children or Adults, 25

5. Dysentery, Griping, Bilious Colic, 25

6. Cholera Morbus, Vomiting, 25

7. Coughs, Cold, Bronchitis, 25

8. Neuralgia, Toothache, Faceache, 25

9. Headaches, Sick Headaches, Vertigo, 25

10. Dyspepsia, Bilious Stomach, 25

11. Suppressed or Painful Periods, 25

12. Rheumatism, Rheumatic Pains, 25

13. Gout, Gouty Difficult Breathing, 25

14. Salt Rheum, Erysipelas, Eruptions, 25

15. Rheumatism, Rheumatic Pains, 25

16. Fever and Ague, Chills, Fever, Ague, 25

17. Piles, Bilious Hemorrhoids, 25

18. Catarrh, acute or chronic; Influenza, 25

19. Whooping Cough, violent coughs, 25

20. General Debility, Physical Weakness, 25

21. Urinary Weakness, 25

22. Disease of the Heart, Palpitation, 1.00

23. Dropsy, Dropsy, Dropsy, 1.00

24. Dropsy, Dropsy, Dropsy, 1.00

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ATTENTION, FARMERS.

FOR SALE, 3 1/2 Miles from Chillicothe,
county seat of Livingston County, Missouri.

A DESIRABLE STOCK FARM,

of 4

The Dairy.

Officers Mississippi Valley Dairy and Creamery Association.

President—Norman J. Colman, St. Louis.
Vice President—Joe W. Drury, Waterloo, Ill.
Second Vice President—Joseph E. Miller, Belleville, Ill.
Treasurer—Wm. N. Tivy, 424 North Second, St. Louis.
Secretary—Joseph W. Sheppard, 600 Olive Street, St. Louis.

H. D. Frisbie, of Cynthiana, Kentucky, advertises in this issue 30 head of full blood Jersey heifers, though unregistered, all from good milk and butter dams. See his advertisement, and write him.

J. W. Stillwell & Co., Troy, Ohio, sold week before last to Hon. W. L. Ewing, Mayor of St. Louis, five heifers and one bull for \$2,100, and one heifer to be bred to their \$5,000 bull, Jacob, for \$400. Thus are Holsteins coming to the front and taking their place in the estimation of the best men and most advanced thinkers in the West. During the same week their sales amounted to the nice sum of \$17,000. In a few weeks we will publish an illustration of their prize herd which is now being engraved at this office.

The farmers of Missouri are surely awakening to the fact, that less plowing and more grass is the order of the day. That sending the crude products of the soil to market, and that often a distant one, costs more money than it does to raise them. That a bushel of corn raised at a cost of ten cents, cannot be shipped and handled at a sum less than that; but if put into butter, pork or beef, fifty bushels can be transported at as little cost. This is startling, if true; and as true as daylight on a mid-summer day.

A St. Louis county subscriber writes he can no longer afford to ship hay to the city whilst the same may be manufactured into milk or butter, and transported much more handsomely and at vastly less expense; and if that be the case within a few miles, what must it be after hauling those miles and then shipping two or three hundred more by rail?

No. As a matter of economy we have to utilize our intelligence, and make our live stock do the manufacturing at home and then send the product to market. We have raised wheat and corn and the like, until we have impoverished ourselves and our land, and made a few men rich by allowing them to charge us what they pleased for transporting it to a distant market.

Grass is king; for whether we use it for beef or mutton, for pork or lard, for milk, butter or cheese, the plow has little to do with it, the labor is trifling and the cost of transportation homeopathic. Moreover, it is a feed for all the year round, and one that can be used to better advantage than any other for all kinds of stock.

Shall we not, too, discriminate in the kind of stock to raise? The native has done good work and faithful, but some of them are losing us money instead of making it, eating their heads off indeed; and as it costs no more to keep good cows than poor ones, we can very well afford to fatten some and send them to the shambles, and in their place introduce some improved breed.

Dairy Convention.

The good, ultimately to be accomplished by the late convention held in this city, can hardly be estimated. The Merchants' Exchange (St. Louis) Price Current, of February 9th, thus refers to it editorially: The Mississippi Valley Dairy and Creamery Convention held its first meeting in this city on the 30th and 31st ult., and was attended by representatives from every State in the Valley. The speakers who appeared before them were practical men of large experience and reputation. The meeting proved a success beyond expectation, and affords strong ground for the belief that the Association may at their next meeting organize in St. Louis a Butter and Cheese Board after the fashion of Elgin. This subject was broached, but action postponed to a future time. The fee being only nominal, the membership is already large, and composed exclusively of those directly interested in the manufacture or handling of Butter and Cheese. The earnestness and life displayed at the meeting affords a good basis for the belief that this association will grow to be a permanent and valuable institution to this section.

Can you give me a remedy for bitter milk? Two of my cows are so afflicted, whilst all the others give nice rich milk with no such taste, and all are treated alike. We feed wheat-bran, corn and fodder. The two giving bitter milk are 10 or 12 years old, the other a Jersey, two years old. One of the old cows gave bitter milk a year ago before calving. After calving, her milk was all right until about three weeks ago, due to calve, 12th May; the other 8th April.

There are many and various causes of bitter milk. The matter was discussed somewhat at the late Dairy and Creamery Convention, but opinions vary. We shall be glad if some of our experienced readers will give their ideas and opinions.

DR. NORMAN J. COLMAN: You are President of the Mississippi Valley Dairy and Creamery Association. I believe you have been a noted stockman for many years and may be able to advise me of which you think the best stock of cattle for milk and butter combined, and where I would be most likely to find such.

My impression is that the Jerseys and Alderneys are too much on one side; too much butter, but I may be mistaken. Please advise me.

Give me also your opinion of what impression a bull of fine milk stock might be expected to make on the milking capacity of good common cows, and oblige.

J. M. C.
Dallas, Texas.

Of milk stock we have the Jersey (in which general name we include all the Channel Island cattle) the Ayrshire and the Holstein. Of these, the two last named will give by all odds the largest quantity of milk, and the last has, as well, the highest record both for milk and butter. The Jerseys and the Ayrshires are both about of a size, both small and comparatively worthless for beef; the Holsteins are larger, much larger, and make excellent beef. Your better plan is to correspond with breeders of each, and form your own opinion.

Their names may be found in the RURAL WORLD always.

The use of a thoroughbred bull of good milking strain could hardly fail to be very beneficial in improving the milk supply of good common cows, much as a Shorthorn would that of beef stock.

The rolled iron portion of your letter we have referred to the L. M. Rumsey Manufacturing Co., of this city, as the best channel through which to do your business. They will in all probability write you.

EDITOR RURAL WORLD: If I was capable of writing articles for your paper upon dairy subjects would like to give my testimony in favor of Missouri for the dairy business. I came from the dairy region of Northern Illinois, where for several years had patronized a cheese factory. Have been here 8 years, and know whereof I speak. Have been making butter and cheese, in a small way, since coming to Missouri, and find it much better than Illinois. Have sold our butter to Ira Boutell, St. Louis, for the last few years. Our cheese finds ready market at home at about 12-15 cts for summer, and 15 cts. for fall. There is now a splendid opening for some live business man to start a creamery in this country.

S. C. H.

Short, practical letters on the dairy are invited to our columns always. We shall, therefore, be glad to hear from S. C. H. Let the letters be short and well digested, however, for our Dairy department is apt to be crowded, and we want the views of many briefly and tersely put, rather than lengthy letters from one or two.

EDITOR RURAL WORLD: I ask, that some practical dairymen tell us through the RURAL WORLD the number of lbs. of butter per year to be relied on from good common, or grade Jersey cows with good treatment and proper care of milk. The time has come, when St. Louis County farmers can no longer afford to send their hay to market. It don't pay. Besides there would be more pleasure in caring for good cows, if the production of butter could be made to pay in St. Louis County on so small a farm as 50 acres.

SUBSCRIBER.

Price, St. Louis Co., Mo., Feb. 12, 1884.

Subscriber is right. He can no longer afford to send his hay to market as hay; a tub of butter weighing 100 pounds, worth twenty-five to thirty dollars net, can be sent 500 miles at less cost than a load of hay can to St. Louis. Within the last few weeks we published the experience of one of the best dairymen in the West, which answers "subscriber" to the letter:

During the past year he has milked sixteen cows, five of which were with their first calves. They are all from five-eighths to fifteen-sixteenths Jersey cattle. In figuring up his last year's business he discovers that from the sixteen cows he has made 5,555 pounds of butter, an average of nearly one pound per day for every cow fed, for which he gets from 32 to 40 cents per pound the year round. His contract with the largest buyers is 32 cents, but others come along now and again and have to pay the retail price gotten by larger buyers, viz., 40 cents; hence, after paying for packages and express charges, the butter for the year has netted him thirty-four cents per pound.

A little figuring will show that he has made his cows, in milk, produce him a fraction over \$120 per annum; a pretty good value for three or four good milk cows. Being asked how he fed them he replied: I feed my cows on grass all through the summer, but when they come up to be milked, always give them a good feed of dry bran, consisting of about one gallon. In winter, however, when grass is short and sometimes not come—a table, he keeps his cows pretty close to the stable, allowing them exercise in going to and coming from water, and feeding them on chopped wheat or oats moistened with water, and mixed with bran and crushed corn and cob meal. Two-thirds of this mixture is composed of chopped wheat or oats, the remainder of bran and corn and cob meal.

Abortion in Cows.

EDITOR FARMER: Let me give you some of my experience with abortion in cows. During the past 25 years I have kept about 20 cows on land mostly cultivated in rotation of crops. Seven years ago I bought what was called a "stock farm," the greater portion of which had never been plowed, but kept to pasture. There were, while on this farm, many cases of abortion among my cows, not only among heifers with their first calves, but also among cows of different ages. A few years ago I sold the "stock farm" and bought another one, on which the soil consisted of sandy loam and limestone soil, which had been cultivated on the rotation system of crops. On this farm there has not been a single case of abortion. Now the question is, "Does fungus accumulate on grass or weeds grown on old pasture lands, which the cows feed upon and thus produce abortion, and which could be exterminated by the plow?" Some are of the opinion that the stauchion has something to do in causing the trouble, but I have used them for nearly 20 years, and do not recall a case of abortion that I could attribute to the stauchion.

Will "blue flag," the common wild blue lily, produce any bad effect on cows? I noticed that stock eat it clean when it is gathered with hay.—G. S., in Orange Farmer.

Wherever milk is used plentifully, there the children grow into robust men and women. Wherever the place is usurped by tea, we have degeneracy swift and certain. Dr. Ferguson, who has devoted a large share of attention to this subject, has ascertained, from careful measurements of numerous factory children, that between thirteen and fourteen years they grow nearly four times as fast on milk for breakfast and supper as on tea and coffee—a fact which shows the benefits of proper diet. No diet is so suitable for growing children as well-cooked oatmeal porridge and milk. Owing to its easy digestibility, it is of equal benefit to invalids, and more especially dyspeptics, who often regain health and pick up flesh at a wonderfully rapid rate on milk, or milk and good bread. Good as cows' milk is for children and invalids, the milk of the goat is much better; and it often happens that persons who thrive and grow strong on the latter, who would not digest the former. For this reason, goats' milk is largely prescribed by the faculty, and would be more so if it were more plentiful. Dr. Pye Chavasse says: "The finest, healthiest children are those who, for the first four or five years of their lives are fed principally upon it." He also states that asses' milk is more valuable for delicate infants; goats' milk for strong ones.—Modern Age.

The Cream Standard.

The Dairy Farmer, published at Liberty, Iowa, gives the following showing of the cream gathering system when conducted on the "average" plan. We give it for what it is worth:

For some time past the Charlton, Iowa, Creamery has been operating upon the test plan of paying for cream, which enables it to pay each patron according to the butter value of their cream. In order that our readers may see the inequality of different patrons' cream we give below a table of individual tests, taking them in their regular order, on one of the largest routes as made during the last half of October. The first column of figures is the number of patrons; the second column the number of inches cream gauge measure; the third column, number of pounds of butter made; fourth column, the number of ounces of butter to the gauge inch:

No. of Patrons.	No. Inches of cream gauge.	No. lbs. of butter.	No. ozs. to the gauge.
1.....	4 1/2	1 15	15
2.....	4 1/2	8 7	13
3.....	4 1/2	4 2	24
4.....	4 1/2	12 3	18
5.....	4 1/2	6 8	10
6.....	4 1/2	7 4	22
7.....	4 1/2	8 8	16
8.....	4 1/2	3 4	19
9.....	4 1/2	7 3	18
10.....	4 1/2	17 1	17
11.....	4 1/2	5 15	19
12.....	4 1/2	3 1	11 1/2
13.....	4 1/2	2 4	9
14.....	4 1/2	10 4	20
15.....	4 1/2	2 4	12
16.....	4 1/2	8 15	9
17.....	4 1/2	3 15	10
18.....	4 1/2	8 7	18
19.....	4 1/2	9 13	13
20.....	4 1/2	10 4	14
21.....	4 1/2	2 1	12
22.....	4 1/2	27 10	17
23.....	4 1/2	2 9	12
24.....	4 1/2	4 2	14
25.....	4 1/2	1 1	8
26.....	4 1/2	3 1	12
27.....	4 1/2	4 1	13
28.....	4 1/2	9 11	10
29.....	4 1/2	8 11	16
30.....	4 1/2	3 11	13
31.....	4 1/2	2 13	11
32.....	4 1/2	2 7	11

Total.....205 3/4 309 lbs. 4 ozs.

Here 205 3/4 inches of cream gauge measure made 209 1/4 pounds of butter, and at the same time this number of ounces of butter to the inch varied from eight ounces up to 24 to the inch. Only five among the number made exactly 16 ounces to the inch.

An Enormous Business.

It is now estimated that over \$200,000,000 are invested in the dairying business in the United States, almost double the money invested in banking and commercial interests. It requires 15,000,000 cows to supply the demand for milk and products in the United States. To feed these cows 60,000,000 acres of land are under cultivation. The agricultural and dairy machinery and implements in use are worth over \$200,000,000. The men employed in the business number 700,000, and the horses nearly 1,000,000. The cows and horses consume annually 30,000,000 tons of hay. It costs \$400,000,000 to feed these cows and horses. The average cow yields about 450 gallons of milk a year, giving a total product of 6,750,000,000 gallons. Fifty per cent of the milk is made into cheese and butter.

DAIRY HINTS.—After you have milked do not carry too long at the pump. A certain amount of water will not be detected, but too much will give you away. Whenever it becomes so thin that you can see the hairs in it you may be sure that you have overdone the matter; unless it is sold directly to city people. Then it is but an act of mercy to water abundantly, for if the milk is too strong it will make them sick.

Never milk while a cow is eating. If you do in time you will never milk the cow while she is not eating. Do not encourage bad traits in a cow.

If the cow will not give down her milk, don't swear, don't club her, don't feed her, don't put her in a sack and hang them over her hips, don't do anything; go to the house and nurse the baby. When a cow says she won't, why she won't, and there's an end on't.—John M. Stahl.

—The old saying, no grass no cattle, no cattle no manure, no manure no crops, is as true to-day as when first spoken. Grass takes care of him who sows it. The meadow is the master mine of wealth. Strong meadows fill big barns. Fat pastures make fat stock. Heavy meadows make happy farmers. Up to my ears in soft grass laughs the fat ox. Sweet pastures make sound butter. Soft hay makes strong wool. These are some of the maxims of the meadow. The grass seed to sow depends upon the soil, and here every man must be his own judge.

—C. R. Beach, of Whitewater, hit one nail on the head when he said in his essay, Eurotas, did not yield 778 pounds of butter in one year, beside one calf, just because she was a Jersey; nor did the cow which gave 18,000 pounds of milk in one year, do so because she got to giving milk and could not stop. They did it because they were bred, fed and generally cared for, with reference to such results. Try a similar experiment on other cows and be surprised at the result.

Chaff.

There are no nice little stories about the return of "The Prodigal Daughter." The son can return and have the finest veal served up for him, but the daughter—she must stay away.

It is quite generally conceded that when a New York man dies he goes to Saturn. He couldn't be content with a future existence in a planet that hadn't as many as two or three rings.

Fashion is Queen. Fast, brilliant and fashionable are the Diamond Dye colors. One package colors 1 to 4 lbs. of goods. 10c. for any color. Get at druggists. Wells, Richardson & Co., Burlington, Vt.

A farmer who was growling at his family and telling them how saving they must be of this and that article of food, etc., received this shot from his youngest child: "Why don't you talk about saving mother?"

"How is Johnnie doing at school?" said a lady to Johnnie's mamma during a call. "Splendidly! He talks two languages now."

"Dear me! What are they—French and German?" "Oh! no—English and profane."

U. S. Surgeon Recommends.—Dr. J. M. G. Pheasant, of U. S. Ex-Surgeon, residing now at Bloomington, Ind. The Dr. writes, to say: "I recommend Samaritan Nervine because it cures epilepsy." Physicians, generally, are its friends.

Remarkable obituary head-line in a Western exchange: "Death's Shining Mark—The Grim Archer Scores a Bull's-Eye in the Person of an Honored Fellow-Townsmen, Alderman Smith—He no longer Blocks the Street Committee, but Trends the Golden Pave."

A gentleman who was no longer young, and who was never handsome, asked his son's child what he thought of him. The boy's parents were present. The youngster made no reply. "Well, so you won't tell me what you think of me? Why won't you?" "Cause I don't want to get licked," replied the sprig of a rising generation.

This powder never varies. A marvel of purity, strength and wholesomeness. More economical than the ordinary kinds, and cannot be sold in competition with the multitude of low test, short weight, alum or phosphate powders. Sold only in cans.

ROYAL BAKING POWDER CO., 106 Wall St. New York

DAIRY SUPPLIES.

FOR SALE.

CARLOAD OF

THIRTY HANDSOME FULL-BLOOD

BUT UNREGISTERED

Jersey Heifers

All from

GOOD MILK AND BUTTER DAMS.

For sale cheap.

H. D. FRISBIE, Cynthiana, Ky.

DAIRY SALT.

BEST in the WORLD for DAIRY and CREAMERY purposes. Sold in bulk, barrels or sacks.

J. F. EWING, Agt.

Michigan Dairy Salt Co., 106 N. Third St. ST. LOUIS, Mo.

DAVIS & RANKIN,

55 & 57 N. Clinton St. and 24, 26, 28 Milwaukee Ave., CHICAGO.

Manufacturers of the

FAIRLAMB

Milk Can

For Cream Gathering, and Dealers in Creamery Supplies.

ASK FOR BEAN & PERRY'S NATURAL BUTTER COLOR.

THE BEST IN THE WORLD

The strongest, most natural tint. Gives the Butter no taste or smell. Patented by the most prominent creamery maker of the world. Price list. Mention this paper. BEAN & PERRY Mfg Co., Rockford, Ill.

Creamery Engines.

Manufactured only

by the

MURRAY IRON

WORKS CO.,

BURLINGTON

IOWA.

All Kinds of Engines & Machinery

SEND FOR CIRCULAR

HOUSEKEEPERS, ATTENTION!

The Improved

UNION CHURN

Has stood the test

for twenty years.

IT IS THE BEST and Handsomest Made.

SENTS WANTED.

ION MANUFACTURING CO. Toledo, O.

A Remedy for Curing CONSUMPTION, COUGHS, BRONCHITIS, ASTHMA AND CROUP.

As an Expectorant it has No Equal.

Rev. B. L. Selman, of the M. E. Church, gives his words in favor of

Allen's Lung Balsam

READ WHAT HE WRITES.

Dear Sir:—Yours of October 20th to hand, and would have answered before now, but having a supply of LUNG BALSAM, and by its use I was improving fast, I concluded to wait awhile.

I have had a cough for about twenty years; last year I was troubled much. I thought I would have to cease traveling, but finding some of your valuable LUNG BALSAM in the bounds of my circuit (I travel in the Rocky Mountain Circuit, M. E. Church South), and as I have tried so many remedies, I concluded to try your LUNG BALSAM, which I did with good success, and thought I was well. Last August, while laboring very hard in protracted meetings, the cough returned; as soon as I could I got another supply of your LUNG BALSAM, and in the past two years I have used about ten bottles, and am able to be up and to preach again.

I could not tell you the amount of medicines I have used in the past twenty years, but I find your LUNG BALSAM superior to anything I have ever used, and I shall use it if I ever need any more, and I shall never cease to recommend your valuable LUNG BALSAM to those who have been afflicted as I have been.

Very truly your obedient servant,

B. L. SELMAN.

Mrs. Geo. B. Tatum writes from Clinton P. O., Va., endorsing ALLEN'S LUNG BALSAM in high praise. She had used it freely among the poor and orphan children under her charge.

MINISTERS and PUBLIC SPEAKERS.

Who are so often afflicted with Throat Diseases, will find a sure remedy in this BALSAM. Lozenges and wafers sometimes give relief, but this BALSAM, taken a few times, will insure a permanent cure.

J. N. HARRIS & CO., Proprietors, CINCINNATI, O.

For Sale by all Medicine Dealers.

Queen of the South

PORTABLE

Farm Mills,

For Stock Food or Meal for Family use, 10,000 IN USE. Write for Pamphlet.

W. S. ROBERT & CO. St. Louis, Mo.

OUR NEW NO. 7 FEED MILL.

The 8th Wonder of the World.

Don't fail to get description before buying. Wanted to grind faster and better than any mill of same price. The lightest draft mill. Has double force feed and CAST-IRON grinding stones. Big, Little, and New Giants. The only mill that will grind with Husk on.

J. A. FIELD & CO. St. Louis, Mo.

Send for prices to

CHEAPEST POWER KNOWN.

WIND POWER

FOR PUMPING, GRINDING, OR SHELLING.

Force Pumps, Tanks, &c.

EVERYTHING PERTAINING TO WATER SUPPLY.

MILLS REPLACED BY BLOWN DOWN.

FEED GRINDERS AND GRASS MILLS A SPECIALTY.

Agents Wanted. Circulars free. Address, KEOKUK WIND ENGINE CO., Keokuk, Iowa.

OUR

No. 1 Plantation Saw Mill,

\$200

(SEND FOR DESCRIPTIVE CIRCULARS)

SMITH, MYERS & SCHNIER,

323, 325, 327 & 329 W. Front St., CINCINNATI, O.

Mention this Paper.

"DRAW CUT!"

BUTCHERS' MACHINES.

Choppers, Hand and Power Sifters, Lard Presses.

Warranted thoroughly and the best in the world.

MURRAY IRON WORKS,

Burlington, Iowa.

Send for circular.

DRAIN YOUR FARM!

The Cheapest Way to Produce good crop

FARM DRAIN TILE.

Send for illustrated circular to S. MITCHELL & SONS, 20 S. 1

The Stock Yards.

Weekly Review of the Live Stock Market.

The receipts and shipments for the week ending at 11 a. m. of the day were as follows:

	Cattle.	Hogs.	Sheep.	Mules.
Wednesday.....	2240	7540	1382	213
Thursday.....	2280	1190	1324	213
Friday.....	1955	5873	3292	190
Saturday.....	1922	1714	3	223
Sunday.....	1272	7245	178	124
Tuesday.....	584	4926	464	155
Total.....	8,334	31,487	8,164	1,362
Last week.....	6,139	27,353	10,381	1,223

The shipments of cattle from Canada to Great Britain, during the last four months, it is said, have been equal to the entire exports of the twelve preceding months.

A pair of remarkable steers are received at the National Stock Yards one day last week. They were twenty hands high, well fattened, and weighed in the neighborhood of 3,000 lbs. apiece. A city butcher purchased them.

The quality of the hogs arriving here the past two or three weeks is without doubt, better than ever before, and is steadily deteriorating. The average weight, it is claimed, will hardly exceed 225 lbs.

Henry American, a prominent inspector, says he has rejected more meat this season than ever before. Not on account of any deficiency in the sweetness of the meat, but on account of the shrinkage, and the loss of weight, caused by farmers feeding their hogs soft corn, instead of sending it to market. This soft corn made a white and nice looking lot, but the loss of weight in the market was considerable.

George S. Taylor, of Hunter, Evans & Co., who made a trip of several hundred miles west on the Central Branch of the Union Pacific railroad, says he found a large number of young hogs and cattle in that section, and the prospects are exceedingly good for a large spring crop.

In October last, when hogs were selling at \$4.45, and it was the general impression that packers would pay even less for the very best, Mr. Lunt Brown, a well known packer, averaged price for packing grades would be over \$5.00. It is needless to say he won.

The National Stock Yards Company, and gentleman doing business there, subscribed \$427.00 to the relief of the food sufferers in Ohio.

The co-partnership heretofore existing under the name of Cash, Stewart & Co., expires on the first of March by limitation. After that date business will be conducted under the firm name of Cash, Stewart & Co., by Mr. E. B. Overstreet, succeeding Mr. Lunt Brown.

CATTLE.—The cattle trade at this time, during the past week, has been comparatively prosperous, and has yielded satisfactory results to those engaged in it. The conspicuous features of the trade was the strength exhibited by the showing in the market, and the willingness of buyers to pay figures asked without much urging. Quotations have been higher for some time than they have been for a long while, and the intention of salesmen to maintain that reputation, as every opportunity is taken to put values up when the market is strong.

This paying of high prices is not confined to one class of buyers, but all are compelled to meet salesmen's views. They, in turn, during the early days of the week, were very large, but later they increased very materially. The bulk, as usual, consisted of a fair to medium quality, with a small sprinkling of superior and really good and choice steers.

These last, which, during the preceding week, steadily developed strength, had undergone no quotable change on Friday when Eastern buyers proved unfavorable and the run of cattle unusually large, they weakened, and buyers taking a firm stand for lower rates, and the market made concessions of 10 to 15c, which more particularly affected fair and medium shipping, and all descriptions of butchers' cattle. The most notable transaction of the week was the sale of a lot of corn-fed Texas steers, averaging 1,250 lbs. at \$7.75, a small lot of open bringing the same prices, and the sales of like descriptions, \$5.25 to \$5.75, remarkably good prices for Texas cattle at this season.

(Native run from \$6.00 to \$6.50, the highest price being \$7.50 and the lowest \$5.00.) The market for Texas cattle was generally slow at irregular prices, bulls and milch cows quiet. The demand, however, was steady for stockers and feeders, and the market was for the former, and \$3.25 to \$3.75 for the latter, Southwest do bringing \$4.00 to \$4.50.

The market on this the closing day of the week was very dull and without feature of interest. Buyers were not disposed to operate, and the amount of business transacted was the smallest of the week, and although weak, were not notably changed and may be quoted as follows:

Exporters..... \$5.25 @ 6.00
Good to heavy steers..... 6.70 @ 7.00
Light to fair steers (grasses)..... 5.25 @ 5.50
Common to medium steers..... 4.50 @ 5.00
Fair to good Colorado steers..... 4.50 @ 5.75
Southwest steers..... 4.00 @ 5.00
Light to good Texas steers..... 3.75 @ 4.50
Fair to good feeders..... 3.75 @ 4.50
Native cows and heifers..... 3.50 @ 4.40
Seawallows of any kind..... 3.50 @ 4.75
Milch cows with calves..... 2.50 @ 3.75
Veal calves..... 6.00 @ 13.00

Representative sales:
51 native steers..... 1307..... \$6.00
20 native steers..... 1206..... 5.70
67 native steers..... 1006..... 5.40
20 native butchers..... 906..... 5.00
23 native heifers..... 814..... 4.60
10 native cows..... 877..... 4.00
18 native calves..... 757..... 3.50
23 native butchers..... 391..... 4.85
23 native butchers..... 394..... 4.75
HOGS.—The hogs were in better demand, occupy the van, and leads the Western markets in prices. Since last week values have advanced steadily until \$7.75 was recorded for choice heavies, when a more liberal supply and unfavorable advices in connection with a weakening in provisions, caused the first decline of any consequence since the boom was established on Wednesday, the opening day of our review, an active trade was had, and good heavies brought \$7.70, rough to good packing sold freely at \$6.65 to \$7.00, butchers to extra, \$7.15 to \$7.70. Yorkers quiet at \$6.00 to \$6.85, and pigs \$5.00 to \$5.40. Thursday was again higher, and \$7.75 was readily obtained for a choice lot averaging 280 lbs. Packers bought most of the offerings at \$6.75 to \$7.75. Yorkers scarce, and but little done on shipper's account. On Wednesday, the market was paid for in sympathy with the declines elsewhere and large receipts. Trading was active however, at \$6.00 to \$6.50 for Yorkers, with some sales at \$6.90 to \$7.00, rough to choice packing \$6.00 to \$6.50, and butchers to heavy, \$6.75 to \$7.00. Saturday the demand was fair, and the offerings were disposed of at \$6.50 to \$7.00. Shippers were out, and butchers paid from \$7.00 to \$7.50.

This market was actually without life, and although salesmen took off 10 to 15c, it was no inducement for buyers to take hold. Values were consequently nominally weak at \$6.50 to \$7.00 for rough to good packing, \$6.00 to \$6.50 for Yorkers, and \$5.00 to \$5.50 for butchers to extra.

Representative sales:
29..... 132..... \$6.15
10..... 103..... 6.00
30..... 230..... 6.00
28..... 240..... 6.00
51..... 172..... 6.00
156..... 205..... 7.10
75..... 200..... 7.00

SHEEP.—This market has not been in as satisfactory a condition as usual, and values have undergone quite a reduction caused by the declining market East. The demand has not exhibited the same vigor of life, and compared with the previous week, the movement was small. It was not until the near close that any improvement was recorded, the feeling becoming stronger and values picked up somewhat. The ruling prices during the week were \$2.50 to \$3.75 for common,

thin sheep, \$4.40 to \$4.60 for good, and \$4.75 to \$5.75 for choice to extra. Strong with sales of really prime at \$6.00, and indications that \$6.50 could be obtained for strictly fancy.

GENERAL MARKET.
FLOUR.—The trade this week was quieter. There was no actual or quotable change to note in values, but the stiffness that has characterized the market during the previous week, was not so marked, nor was the feeling so buoyant. A moderate demand was had for leading grades on Southern account, which generally brought the same prices as were current last week. The local demand was also quiet. We quote fancy \$5.25 to \$5.50; choice \$4.65 to \$5.00; family \$4.15 to \$4.50; \$3.60 to \$3.75; XX \$3.05 to \$3.25; X \$2.90 to \$3.00; superfine \$2.50 to \$2.65; fine \$2.40 to \$2.50; patents \$2.70 to \$2.85.

CORN.—Received into elevators during week 331,710 bushels. Withdrawn 287,713 bushels. Corn followed wheat closely, but was sustained at times by provisions and the light receipts. Trading was light in a speculative way, but the inquiry for cash grades was quite steady throughout the week. At the close prices were unchanged. There were few orders, and the course to values was really dictated by wheat. May opened at 33½, and fell to 32½, fell off largely with sales of 250,000 bu. at 32½ to 33½ at the close. February sold at 50½. March at 50½. April at 50½ to 51, and June at 54½. Cash No. 2 mixed sold ½¢ off at 26½, regular to 26½. Eastern, but was in shipping and accumulative demand. No. 2 white mixed was better at \$4.50 to \$4.75, and other grades steady at 52½ bid for rejected 42½ to 43½, and 44 E. side. New mixed 47½ to 48½. No grade 38½ to 39 E. side.

WHEAT.—Received into elevators during week 52,994 bushels; withdrawn 33,228 bushels. Up to Friday the general market for both cash and futures was weak and irregular with a bearish tendency to prices. But on this day and up to the close prices have advanced largely. May going to \$1.12. A re-advance in prices was not expected from other markets and prices gradually fell back to \$1.11½. Large sales of cash No. 3 red were made to millers during the week, but prices were not made public. One transfer was made to 213,000 bushels and another of 65,000 was made shortly after. This sent prices up rapidly, but the close was weaker, and like wheat the market closed at a decline. February closed at \$1.08 bid, March sold at \$1.03; 41½, April had \$1.09½ bid. May brought \$1.10, and June \$1.10½. Eastern, but was in shipping and accumulative demand. No. 2 white mixed was better at \$4.50 to \$4.75, and other grades steady at 52½ bid for rejected 42½ to 43½, and 44 E. side. New mixed 47½ to 48½. No grade 38½ to 39 E. side.

OATS.—Received into elevators during week 115,000 bushels. Withdrawn 115,000 bushels. Oats were dull and weak, throughout the week and received little attention as only an occasional order was received. On Friday, however, they were found in demand, and May selling at 41½ decline at 36½, but later was bid only 36½. February and March were held at 36½ with no small demand, but offerings were light, and steady rates prevailed. No. 2 at 35½ to 36½ in E. 35½ in S. L. 1-2 bid, rejected 7 bid. No. 3 Mediterranean \$1.00 bid.

RAISINS.—Received into elevators during week 115,000 bushels. Withdrawn 115,000 bushels. Raisins were dull and weak, throughout the week and received little attention as only an occasional order was received. On Friday, however, they were found in demand, and May selling at 41½ decline at 36½, but later was bid only 36½. February and March were held at 36½ with no small demand, but offerings were light, and steady rates prevailed. No. 2 at 35½ to 36½ in E. 35½ in S. L. 1-2 bid, rejected 7 bid. No. 3 Mediterranean \$1.00 bid.

EGGS.—Lower, but in large movements at this time. Late, offers freely at 15c, only 17-18c bid.

A Revolution in Plowing.
From the MOLINE PLOW CO., Moline, Illinois, we have received a handsome colored lithograph showing in a clear and concise manner a new three-wheel sulky plow the "Flying Dutchman," and on the left the phantom plow in use, with a description of its glories, and an accompanying circular gives full particulars of this new sulky plow, which is quaintly named the "Flying Dutchman."

This paying of high prices is not confined to one class of buyers, but all are compelled to meet salesmen's views. They, in turn, during the early days of the week, were very large, but later they increased very materially. The bulk, as usual, consisted of a fair to medium quality, with a small sprinkling of superior and really good and choice steers.

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CORN.—Received into elevators during week 331,710 bushels. Withdrawn 287,713 bushels. Corn followed wheat closely, but was sustained at times by provisions and the light receipts. Trading was light in a speculative way, but the inquiry for cash grades was quite steady throughout the week. At the close prices were unchanged. There were few orders, and the course to values was really dictated by wheat. May opened at 33½, and fell to 32½, fell off largely with sales of 250,000 bu. at 32½ to 33½ at the close. February sold at 50½. March at 50½. April at 50½ to 51, and June at 54½. Cash No. 2 mixed sold ½¢ off at 26½, regular to 26½. Eastern, but was in shipping and accumulative demand. No. 2 white mixed was better at \$4.50 to \$4.75, and other grades steady at 52½ bid for rejected 42½ to 43½, and 44 E. side. New mixed 47½ to 48½. No grade 38½ to 39 E. side.

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Twin Foes to Life

Are Indigestion and Constipation. Their primary symptoms are among the most distressing of minor human ailments, and a host of diseases, speedily resultant from them, mutually aggravate each other, and at once the whole machinery of life. Nausea, Foul Breath, Sour Stomach, Dizziness, Headache, Bilious Fever, Jaundice, Dyspepsia, Kidney Diseases, Piles, Rheumatism, Neuralgia, Dropsy, and various Skin Disorders, are among the symptoms and malady caused by derangement of the stomach and bowels.

A Thorough Purgative
medicine is the first necessity for cure. Then the cathartic effect must be maintained, in a mild degree, just sufficient to prevent a recurrence of costiveness, and at the same time the liver, stomach and bowels must be stimulated and strengthened.

Ayer's Pills
Accomplish this restorative work better than any other medicine. They are laxative and thorough yet mild, and their purgative action. They do not gripe the patient, and do not induce a costive reaction, as is the effect of other cathartics. Withal, they possess special properties, diuretic, hepatic and tonic, of the highest medicinal value and